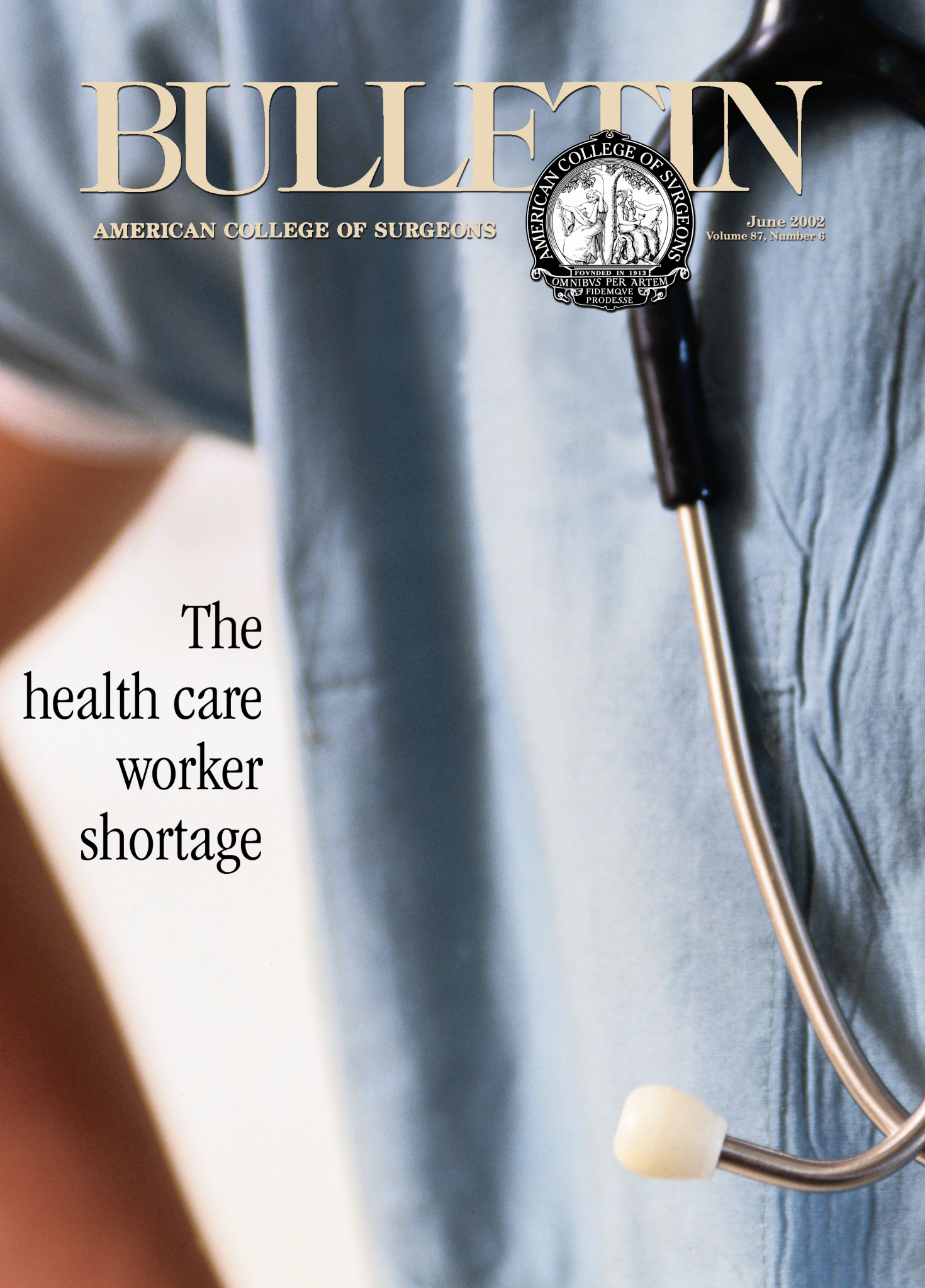
BULLETIN
AMERICAN COLLEGE OF SURGEONS
June 2002
Volume 87, Number 6



The health care worker shortage

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JUNE 2002
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About the cover...

This month's issue of the *Bulletin* features two articles pertaining to the health care worker shortage, a problem that is reaching crisis proportions. Nurses offer their perspective on the causes of the situation and efforts to resolve it (p. 8). Andrew L. Warshaw, MD, FACS, and other members of the surgical team provide their insights in the article on page 13.

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From my perspective



Historically, surgical services have been viewed as comprehensive treatment packages that include pre- and postoperative care in addition to the operation itself. However, as the basis for Medicare payment moved from the "usual and customary" standard to the current Medicare fee schedule, a new national definition of global surgical services developed. Until that time, local Medicare carriers followed literally dozens of global service policies. We have now come to understand that global services include not only the operation, but preoperative care for the 24 hours before surgery and postoperative care for either 10 or 90 days, depending on the nature of the procedure.

Adding strength to the policy, the so-called correct coding initiative ensures that procedure codes that typically comprise the various components of a global service cannot be "unbundled" and charged separately.

Negative impact

Surgeons have discussed with me and other staff of the College the very significant impact of the global services concept. First of all, it certainly has constrained the growth of and payment for surgical services. Medicare had inaccurately predicted that surgeons who would experience significant reductions because of the implementation of the fee schedule would compensate for the shortfall by increasing the volume of services they provide. Such an increase in services never occurred.

Further, the new payment system undervalued many surgical services even though the cost of paying separately for each component of a bundled service would have been much higher. The College's General Surgery Coding and Reimbursement Committee recognized this problem and advised Medicare officials that many services needed to be assigned higher relative value units, using a "building block" methodology. The committee succeeded in persuading those officials that many of these comprehensive services should be paid at a higher level.

"The structure of the global surgical fee makes clear that it is our responsibility as surgeons to remain intimately involved in postoperative treatment if we intend to be paid the global fee."

Unfortunately, the reduction in the 2002 conversion factor undid many of these gains.

Another problem with the global fee is that it does not account for the difficulty of some cases. It assigns values based on the work and other resources needed to care for the "typical patient" and does not take anything else—such as the patient's severity of illness, age, or complicating factors—into account.

Positive aspects

On a more positive note, the global surgical service structure attempts to maintain continuity of care during the postoperative period because payment is locked into the provision of follow-up services. As a result, surgeons cannot

be barred from having access to their patients in the intensive care unit or from otherwise treating or directing the postoperative care of their patients.

The College strongly believes that surgical care involves treatment of the patient throughout the course of the disease or condition that necessitated the operation. This belief is the premise behind the College's ban on itinerant surgery.

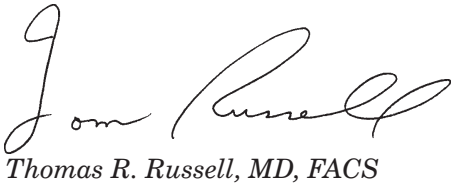
The structure of the global surgical fee makes clear that it is our responsibility as surgeons to remain intimately involved in postoperative treatment if we intend to be paid the global fee. While delegating postoperative care to associates or teams of specialists is often appropriate and necessary given the complexities of modern postoperative management, surgeons are responsible for maintaining personal involvement with the patient and his or her family after the operation is completed.

One other positive aspect of the global surgical fee is that in some respects it protects surgeons from audits. To receive payment for a global surgical service, surgeons are obligated to document that they performed the procedure and supervised the case postoperatively. However, they do not need to document the level of the postoperative visit services they perform.

Outlook

Whatever one's views about the global service methodology may be, it certainly will be with us for the foreseeable future. In recent years, the CPT editorial panel has considered proposals to abandon the concept, but Medicare has indicated that it is determined to retain the policy. Meanwhile, some parties have expressed interest in expanding the system to encompass other areas of medicine, such as the treatment of chronic medical conditions, but this concept has not received a great deal of consideration.

The College has continually expressed its concerns about components of the Medicare fee schedule that pose problems for surgeons. We are just as steadfast in our efforts to work with the surgical specialty societies and with Medicare administrators to resolve these issues as we are in stressing the need for surgeons to have direct contact with their patients before, during, and after an operation.



Thomas R. Russell, MD, FACS

If you have comments or suggestions about this or other issues, please send them to Dr. Russell at fmp@facs.org.

FYI: *STAT*

Three ACS standing committees met in the Washington Office during recent weeks: the **General Surgery Coding and Reimbursement Committee,** the **Health Policy Steering Committee,** and the **Patient Safety and Professional Liability Committee.** Of particular interest, the Health Policy Steering Committee ended its meeting on May 13 with a visit to Capitol Hill to aid in the effort to educate lawmakers about the challenging practice environment facing surgeons today.

Executive Director Thomas R. Russell, MD, FACS, and ACS President R. Scott Jones, MD, FACS, continue to spend considerable time visiting ACS chapters and other groups of importance to the College. In recent weeks, they both attended the annual meetings of the **American Surgical Association** and the **American Urological Association,** and participated in the **ACS/National Board on Educational Testing and Public Policy Educational Conference on Surgical Simulation** in Boston, MA. In addition, Dr. Russell attended the annual meeting of the **American Society of Breast Surgeons** and a regional symposium sponsored by the **University of Louisville, KY.** He also visited the **North and South Dakota Chapter** and the **Northern California Chapter** and presented the Bacon Lecture during the annual meeting of the **American Society of Colon and Rectal Surgeons.** Dr. Jones visited the **Chilean Chapter** and attended the annual meetings of the **Royal Australasian College of Surgeons** and the **Association of Surgeons of Great Britain and Ireland.**

An opportunity to visit "A Town Meeting—The 21st Century Health Care System," which opened the College's Spring Meeting, April 14, in San Diego is now available through the College Web site. A Web cast of this important session, the Assembly for General Surgeons, can be accessed by visiting the College's home page at *http://www.facs.org* and scrolling down the page. Presentations by the Honorable David Satcher, MD, PhD; Sir Barry Jackson, MBBS, MS, FRCS, FACS (Hon); Don E. Detmer, MD, FACS; Anthony A. Meyer, MD, FACS; George F. Sheldon, MD, FACS; Haile T. Debas, MD, FACS; and A. Brent Eastman, MD, FACS, are included in the Web cast. Visitors can download a high-speed or low-speed version of each speaker's presentation, and a text transcript accompanies each speaker's remarks.

The following ACS Chapters traveled to Washington, DC, during March and April to participate in the **College's Chapter Visit Program:** Tennessee, Kansas, Kentucky, Brooklyn/Long Island, and Florida. Chapter representatives met with members of Congress and their staffs and discussed such issues as physician payment, medical liability reform, and funding for trauma care systems. Chapters will continue visiting Washington, DC, through July.

Dateline Washington

prepared by the Division of Advocacy and Health Policy

Bipartisan tort reform legislation introduced

A bipartisan group of legislators, including Reps. James Greenwood (R-PA), Christopher Cox (R-CA), John Murtha (D-PA), Charles Stenholm (D-TX), Collin Peterson (D-MN), and James Moran (D-VA), introduced legislation April 25 aimed at reforming the medical liability system. The Help Efficient, Accessible, Low Cost, Timely Health Care Act (HEALTH) of 2002, H.R. 4600, closely follows California's model tort reform law and includes a $250,000 cap on noneconomic damages. The legislation also imposes a three-year statute of limitations for filing a lawsuit, requires that defendants only be responsible for proportional damages, modifies the collateral source rule, allows for periodic payment of future damages, and limits attorneys' fees.

Coalition calls for immediate liability relief

The Health Care Liability Alliance (HCLA) released the findings of a nationwide study of the American public's perception of the liability crisis during a press conference April 23 at the National Press Club in Washington, DC. The coalition, chaired by a member of the College's Washington Office staff, announced the results and introduced a panel of physicians and hospital administrators who spoke about how mounting problems with increased liability premiums threaten patient access to care. For example, ACS Governor Joseph Thornton, MD, FACS, testified that Nevada's out-of-control liability situation forced him to close his doors three years before he planned to retire.

The HCLA poll of the public showed that by overwhelming margins Americans favor medical liability reform. Four out of five respondents (78%) are concerned that skyrocketing liability costs could limit access to care. More than seven out of 10 Americans (71%) believe that medical liability litigation is one of the primary forces driving the increase in health care costs. By a wide margin (73%), Americans favor a law that would guarantee injured patients full payment for lost wages and medical costs and place reasonable limits on awards for "pain and suffering." Finally, more than three-quarters of those surveyed (76%) favor a law limiting the percentage a trial lawyer can collect in a settlement.

ACS comments on HIPAA privacy standards

The College submitted comments to the Department of Health and Human Services (HHS) on April 26 regarding proposed revisions to the medical records confidentiality standards mandated by the Health Insurance Portability and Accountability Act (HIPAA). HHS's latest revisions modify several key areas of the final privacy rule, including those related to patient consent, "de-identification" of data, research, incidental disclosures, and contractual agreements between covered entities and other parties receiving protected health information.

The College's comments address the regulations both from the standpoint of practicing surgeons and from the research perspective. In particular, they stress the importance of crafting standards that will protect patients' personal health care information while allowing contin-

ued access to the data necessary to conduct outcomes research and quality improvement efforts. The College's comments are available at *http://www.facs.org/dept/hpa/views/hipaa.html*.

College objects to MedPAC assistants at surgery proposal

The College coordinated and sent a coalition letter April 22 to the Medicare Payment Advisory Commission (MedPAC) to express deep concern about proposed changes to current Medicare payment policies pertaining to assistants at surgery. A total of 42 national organizations representing physicians, nonphysician providers, and group practices signed the letter.

At the time the letter was drafted, the panel was debating whether Medicare reimbursement for assistant at surgery services provided by physicians and others should be "bundled" into either the hospital's or the primary surgeon's payment. The commission subsequently announced at its meeting on April 25 that it was abandoning these proposals. With regard to its response to a request from Congress to evaluate whether surgical technologists should be paid separately when they serve as assistants at surgery, MedPAC intends to recommend that current policies be maintained. The full text of the letter may be retrieved at *http://www.facs.org/dept/hpa/views/assistants.htm*.

ACS joins National Quality Forum

The College joined the National Quality Forum (NQF) to ensure that surgeons are active participants in the development and implementation of proposed clinical quality and outcome measures that would be shared throughout the nation. NQF has a number of prominent members, such as the Leap Frog Group, which have very specific quality recommendations that pose concerns for surgery. On April 18, Thomas R. Russell, MD, FACS, ACS Executive Director, provided comments on the draft consensus report, "Making Healthcare Safer for Patients: Evidence-Based Practices." In his remarks, Dr. Russell noted that the College supports the spirit of this effort and applauds NQF's effort to pull together disparate perspectives into a comprehensive proposal.

However, several areas of the process are of specific concern to the College, including the fact that implementation plans do not include substantial physician involvement. In addition, NQF has adopted the Leap Frog proposal of implementing Computerized Order Systems without considering the expense or the possibility that health care systems could develop other safety mechanisms that work equally well. The College also finds that the report places significant emphasis on directing patients to high-volume institutions. The College's comments cite recent clinical findings that challenge the data upon which the forecasts are based and suggests that the "practice makes perfect" assumption is not based on solid data.



The health care worker shortage

Nurses offer their perspective

by Sheila L. Allen, RN, CNOR, and Suzanne C. Beyea, RN, PhD, Denver, CO

The American Hospital Association reports that the greatest threat to America's health care system is the growing shortage of qualified personnel and that the greatest majority of open positions are for nurses.[1] The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) states that the current nursing shortage is "unprecedented in its complexity and future implications."[2] Three major factors have been identified as contributing to the current shortage: (1) declining enrollments, (2) an aging workforce, and (3) competition for skilled personnel.

Many experts believe that the nurse workforce shortage will worsen in the next two decades when the largest cohorts of registered nurses (RNs) enter their 50s and 60s and eventually retire. Concurrently, as large numbers of nurses retire, the Baby Boomer generation will require more health care. These two factors alone lead to a prediction that the nurse workforce will fall to nearly 20 percent (400,000 RNs) below projected needs by the year 2020.[1] This overall situation has significantly contributed to shortages in all specialties and specifically in the operating room (OR), where there are numerous reports of significant and noticeable shortages.

Background

Many analysts have questioned the extent and intensity of the shortage among perioperative RNs. Although many have provided anecdotal reports, quantitative data exists regarding the shortage of qualified staff and vacant positions specific to the OR nurses. When 1,500 Voluntary Hospitals of America perioperative leaders were surveyed, 57 percent of respondents reported vacant professional nursing positions at their institutions. The average number of vacancies was five for every nine positions. Respondents also reported that it took an average of five months to fill such positions.[3]

Two studies conducted for Surgical Information Systems (SIS) by the Gallup Organization provide further evidence regarding the nursing shortage in surgical settings. In August 1999, SIS reported that OR Directors (n = 405) were experiencing an average of 2.14 unfilled full-time nurse positions.[4] Subsequently, in January 2001, SIS reported that OR directors (n = 401) were experiencing an average of 1.4 unfilled full-time nurse positions.[5] Despite what appears to be a slight decline in the number of open nurse positions, in both studies OR directors reported the lack of qualified nurses as their biggest concern about the future of OR nursing. Shortages, such as those reported by SIS and VHA, indicate that hospitals may be routinely delaying or postponing elective surgeries because of a lack of qualified nurses to care for patients and to staff the OR suite.

The extent of the overall nursing shortage continues to worsen. A recent analysis of 16 major studies examining the nursing shortage reports that the nursing shortage is real, that past solutions will be inadequate, and that workforce and public health crises loom in the future. This same analysis also indicates that the nursing workforce crisis is present everywhere, except Montana, and the intensity is related to the diversity of the population and penetration of managed care, independent of educational opportunities.[6]

Etiologies

Numerous factors contribute to the current nursing shortage and specifically the lack of operating room nurses. Major reasons for the nursing shortage as a whole include the aging workforce, decreasing enrollments, a devaluing of nursing as a profession, increasing care demands by an aging population, the changing nature of the health care environment, and the resulting stress on the individuals providing care.[7] Factors attributed to the current and worsening shortage in the OR include: (1) an aging workforce with many current and imminent retirements; (2) the lack of surgical education content and clinical experiences for nursing students; (3) demands for professional nurses in ambulatory care surgical settings; and (4) the difficulty of attracting and keeping OR nurses.[8] Although these factors exist in numerous clinical areas, their effects seem more dramatic in the OR.

Nursing shortages are worsening at a time when job satisfaction in the field appears to be at a record low, with more nurses in hospitals reporting less satisfaction with their employment.[9] Aiken also reports that more than 40 percent of nurses working in hospitals report dissatisfaction with their jobs and that one in three hospital nurses under the age of 30 plan to leave their current job in the next year.[10]

The greatest concerns among staff nurses include: (1) the malaise that has beset health care and nursing; (2) financial concerns, including salary; (3) empowerment of the profession and managers; (4) support for change; and (5) the profession's image.[6]

Specific issues for nurses appear to be the acute/chronic effects of stress and overwork as a health and safety concern. Health concerns include the risk of severe back injury, deadly disease, physical assault, latex allergy, and all types of accidents. Eighty percent of nurses report not feeling entirely safe in their current work situation, and many others report grave concern about their ability to provide safe care after prolonged hours of work.

Verbal abuse is reported by 60 percent of nurses. The high number of health threats and rates of verbal abuse take a significant toll on nurses, leading 88 percent of survey respondents to report that health and safety concerns influence their decision to leave the profession.[11] This type of work environment does not contribute to staff retention or help attract unemployed RNs back to the health care workforce.

Although compensation has rarely been cited as a primary reason for the current nursing shortage, anecdotal reports suggest some level of dissatisfaction with compensation models for OR

nurses. Operating room nurses voice concerns about adequate compensation for the overtime, call time, and the extremely long hours they sometimes are required to work. Most hospitals have been hesitant to create compensation models for perioperative nurses to address the unique nature and demands of the work and the required clinical skills and expertise. The existing nursing shortage has already resulted in staff nurses working extra hours, mandatory overtime, and an increased burden of call hours. Unfortunately, these factors further contribute to additional OR nurses leaving their specialty practice or profession.

RNs: Critical to the team

Registered professional nurses share accountability with physicians/surgeons and are one of the only other clinical partners on the surgical team with specific legal and regulatory responsibilities to the patient. For example, RNs share the accountability for patient identification, site verification, and the completeness and accuracy of the surgical consent. While the surgeon is accountable for the operative procedure, the perioperative RN has a specific scope of practice that includes supporting the teamwork in the OR. The RN is specifically accountable for the nursing components of care, including the collection and documentation of a preoperative nursing assessment.[12] Based on this assessment, the nurse plans and performs nursing activities that contribute to the patient's health outcomes. High-functioning teams in the OR ensure cost-effective, efficient, high-quality surgical outcomes.



Ms. Allen *is immediate past-president, AORN: Association of periOperative Registered Nurses, Denver, CO.*

There is much evidence to support the use of RNs. One study found that the mortality rates at 3,763 U.S. hospitals decreased when staffing models comprised higher numbers of RNs, registered pharmacists, medical residents, medical technologists, and total hospital personnel. Interestingly, the same study reported that a higher number of hospital administrators and licensed vocational/licensed nurses was associated with higher mortality rates.[13] Another study of more than 5 million patient discharges in 1997 from 799 hospitals in 11 states shows that the number and mix of nurses in a hospital makes a difference in the quality of care that patients receive at the facility. This study found a strong and consistent relationship between nurse staffing and five outcomes in medical patients and death among patients with shock, sepsis, pneumonia, deep vein thrombosis/pulmonary embolism, or gastrointestinal bleeding for individuals undergoing major surgery. The study found that a higher number of RNs was associated with a 3 to 12 percent reduction in the rates of adverse outcomes. Reduction in the rates of adverse events and complications reduces costs for hospitals and patients and protects patients' health and well-being.[14]

These data support the presence of a registered professional nurse in all clinical settings within acute care hospitals. The results further suggest that removing the registered nurse from the OR and allowing a potentially less skilled worker to assume any RN responsibilities would place patients at an increased and unnecessary risk of death or other negative outcome.

Nurses bring a unique body of knowledge to perioperative settings. Registered nurses contribute significantly to cost-effective, efficient, high-quality, and safe care in the surgical setting. Surgeons and nurses share concerns about patient safety and quality care. The Association of periOperative Registered Nurses (AORN) welcomes the opportunity to work with surgeons and other members of the health care team to address the shortage of perioperative RNs in the OR.

AORN's response

At the AORN, every department is involved in efforts and activities that address the nursing shortage. For example, in 1999, AORN developed and implemented a fully integrated curriculum for

nurses who did not have any experience in the operating room. This course, Perioperative Nursing Course 101, is presented in a scripted modular format consisting of 26 educational topics, PowerPoint® slides, post tests, and text reading assignments. The course uses the "train the trainer" concept and has been implemented in more than 225 clinical settings. Approximately 800 students have taken the course in hospitals, freestanding ambulatory surgery settings, pediatric specialty hospitals, and academic settings. Contact hours are awarded to the learners, and the course is applicable toward course credit.

AORN also publishes a core curriculum and numerous video educational programs that present the required knowledge and clinical skills required for perioperative nurses. These serve as introductory or review resources and provide valuable tools for organizations that choose to design their own educational program.

Additionally, AORN provides a Web-based directory of perioperative nursing courses for students and nurses interested in a career in perioperative nursing. This directory links to the AORN Foundation for scholarship information and to other nursing sites. AORN has also sponsored a number of workshops and educational sessions on recruiting and retaining staff. Furthermore, AORN members actively work with schools of nursing to support perioperative nursing experiences for students and increase the emphasis on surgical content. AORN's national committee on education is in the process of developing a "tool kit" for members to use when promoting the inclusion of perioperative content in nursing school curricula.

To assist AORN members in developing mentoring skills, the organization also provides numerous educational sessions and journal articles. This year, AORN is offering free registration to student nurses at their annual meeting. Students will be invited to attend a special student nurse reception, where they will meet a number of nursing leaders. During AORN's Congress, students are being offered a full-day course entitled "Understanding the OR." This course will provide hands-on instruction on such topics as aseptic technique, positioning, and sterilization.

AORN has supported and participated in Nurses for a Healthier Tomorrow (NHT), a coalition of nursing and health care organizations. This group's efforts have focused on creating communication programs targeted to young people so they will consider nursing as a career option. NHT has developed and maintains a Web site at *http://www.nursesource.org*. Its intended purpose is communicating the tremendous number of opportunities within the nursing profession and presenting its social importance and career satisfaction.

AORN conducts an active public relations campaign with its members and external stakeholders regarding the nursing shortage. AORN has placed news articles about perioperative nursing in several general newspapers across the country. Additionally, both the *AORN Journal* and *Surgical Services Management* have published numerous articles regarding the nursing shortage and retention strategies. Currently, AORN distributes a video program titled "Nursing: The Ultimate Adventure, Perioperative Edition." This video discusses the opportunities within the nursing profession. Career-oriented brochures entitled, "Consider a Career in the OR As a Perioperative Nurse" are also available. AORN sponsors Perioperative Nurse Week each November. The focus of these efforts is on encouraging perioperative nurses to share information about their nursing specialty with the general public.

The AORN department of government affairs actively monitors legislation on staffing, funding related to nursing education, and health and safety issues for nurses at the federal and state level. AORN has joined more than 30 other nursing organizations in a consensus statement entitled "Assuring Quality Health Care for the United States:

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Supporting Nurse Education and Training, Building an Adequate Supply of Nurses," which identifies factors contributing to the nursing crisis. This ad hoc group calls itself Americans for Nursing Shortage Relief (ANSR) and holds regular meetings in Washington, DC, which our federal liaison, Karen S. Sealander, JD, attends. AORN also is involved in initiatives with the Occupational Safety and Health Administration and the National Institute for Occupational Safety and Health on reducing health and safety risks in the perioperative environment.

Other shortage-related activities AORN supports include: entry-level student nurse scholarships; research related to recruitment and retention; position statements related to staffing ratios, the responsibility of mentoring and student learning activities; resources on recruitment and retention; scholarships for nurses interested in perioperative nursing; and conference grants.

As potential consumers of health care, AORN members have grave concerns about the worsening shortage of qualified staff. With an ever-increasing number of adverse events, such as wrong-site or wrong-procedure surgery, occurring in ORs across the U.S., the need for qualified, experienced staff has never seemed more acute. AORN will continue to support efforts that address this issue while exploring new initiatives and collaborative opportunities with other professional organizations as well as the health care industry. AORN remains committed to the belief that every perioperative patient deserves a well-qualified, competent registered nurse. Ω

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The health care worker shortage

Suggested responses from the surgical community

by Jeanette Ives Erickson, RN, Andrew L. Warshaw, MD, FACS, and Marianne Ditomassi, RN, Boston, MA

With the dawn of a new century, the shortage of health care workers emerged as an international problem. Unlike previous cyclical shortages of American nurses, this shortage includes almost all health care workers and is predicted to have worldwide effects and a prolonged duration.

Why is there a shortage? How likely are we to see the problem continue? What is the impact on the overall health care delivery system?

The factors contributing to the health care worker shortage are multifaceted and include, but are not limited to, the following:

- The supply of health care workers is not keeping pace with the population growth and the aging of Americans.
- The number of people selecting health care as a career has decreased, and, therefore, new entrants to the field are not keeping pace with retirees and the increasing demand for health care workers.
- Minority racial/ethnic groups are underrepresented among nurses and other health care workers.
- The dramatic changes in health care over the past decade have altered the roles and responsibilities of the registered nurse.
- Employers are having difficulty filling registered nurse vacancies while reducing overall expenses by decreasing clinical and operational sup-

port staff. As a result, an increased burden is placed on registered nurses.

In this article, we describe the current health care worker pool, identify factors contributing to the shortage, and recommend effective strategies that surgeons working with nurses can employ to deal with this dilemma.

The problem

A comprehensive review of the health care labor force across the country has found that the number of health care workers is declining. The Bureau of Labor tells us that the demand for health care professionals is predicted to grow 24.6 percent by the year 2010.[1] At the same time, society's demand for health care services is increasing (see Table 1, this page).[2] Over the long term, health care researchers and administrators predict a worsening scenario. While the shortage of health care workers includes several role groups, nursing faces the greatest challenge. Why? Simply put, the average age of nurses has increased substantially and the number of nurses being educated is not keeping pace with the increased demand for nursing care.

Registered nurses (RNs) currently comprise the largest segment of health care professionals in the U.S. Today's nursing shortage is very different from those experienced in the past, and the actual breadth of the nursing shortage is difficult to quantify (see Table 2, this page).[3] Nursing and health policy researchers have identified that the main factor that has led to the aging of the RN workforce appears to be the decline during the last two decades in younger women choosing nursing as a career. It is predicted that unless this trend is reversed, the RN workforce will continue to age and eventually shrink to the point where it will not meet projected long-term workforce requirements.

Indeed, one of the most critical problems facing nursing is the aging of practitioners and faculty. An estimated 2.7 million RNs are licensed in the U.S., with 82 percent actively working in the profession. The average age of registered nurses is 45.2 years. RNs who are less than 30 years old represent only 10 percent of the total working population. According to a survey conducted by the American Association of Colleges of Nursing (AACN), the average age of nursing school associate professors and assistant professors are 52 and

Table 1

Society's demand for health care[2]

- U.S. population is increasing at 1 percent per year.
- Population is rapidly aging:
 —People ages 85 and over will double from 3.5 million today to 7 million in 2020.
- Societal issues will increase demand:
 —Rise in antibiotic-resistant infections
 —Spread of air- and waterborne diseases
 —Rising drug abuse
 —Higher highway speed limits
 —Increased alcoholism
- Innovations in diagnostic, treatment, and monitoring technologies will increase demand.
- As personal income rises, more health care is consumed.
- As demand for health care increases, so, too, will the demand for personal care services provided by health organizations that employ nursing personnel.

Source: Harvard Nursing Research Institute, 1998.[2]

Table 2

National sample survey of RNs 2000[3]

- 2.7 million licensed nurses, up 5.4 percent from 1996 (U.S. population increased 13% in that same period); but number of nurses working in hospital settings increased only by 81.8 percent of licensed nurses are employed in nursing.
- 42.9 percent of licensed registered nurses hold a baccalaureate, masters, or doctorate as highest degree.
- Average age of RN is 45.2 years; average age of RNs working in nursing is 43.3 years, up from 42.3 years in 1996.
- Men constitute 5.9 percent of RN population, up from 5.4 percent in 1996.
- 12.3 percent of RN population reported being in one or more racial and ethnic minority group, up from 10.3 percent in 1996.

Source: Division of Nursing, Bureau of Health Professions, Health Resources and Services Administration.[3]

Table 3

Key constructs for nurse satisfaction

RN-MD relations—Establish good relations with physicians that facilitate exchange of important clinical information.

- Physicians and nurses have good relationships.
- A lot of teamwork between nurses and physicians.

Control of practice setting—Exert control over the practice setting to focus resources as required for good patient care.

- Adequate support services allow nurses to spend time with patients.
- Enough time and opportunity to discuss patient care problems with other nurses.
- Enough registered nurses on staff to provide quality patient care.
- A nurse manager who is a good manager and leader.
- Enough staff to get the work done.
- Opportunity to work on a highly specialized patient care unit.
- Patient care assignments that foster continuity of care, that is, the same nurse cares for the patient from one day to the next.

Autonomy—Exercise professional judgment in a timely fashion. A supervisory staff that is supportive of the nurses.

- Nursing controls its own practice.
- Freedom to make important patient care and work decisions.
- Not being placed in a position of having to do things that are against the nurse's judgment.
- A nurse manager/supervisor who backs up the nursing staff in decision making, even if the conflict is with a physician.

Source: *American Journal of Nursing*.[10]

49, respectively. The shrinking pool of nursing faculty will affect the ability of nursing schools to educate sufficient numbers of registered nurses to meet future demand.[4]

A 2000 American Hospital Association survey found that most U.S. hospitals are currently managing the situation well, with 75 percent of hospitals reporting vacancies being filled in one to three months. Demand for registered nurses is predicted to outstrip supply by 2010. However, the same survey indicates a shift to new graduate nurses being hired to fill positions. A sample of the RN workforce describes a dramatic shift between 1990 and 2000:

- 1990: 90 percent experienced nurses, 10 percent new graduates.
- 2000: 50 percent experienced nurses, 50 percent new graduates.

It is important to note that the motivations for young and future workers are different from those of years past. Generation X employees have cited an attraction to working in environments that are service-oriented, nonhierarchical, flexible, welcoming, ethnically diverse, and committed to retraining. In addition, they say it is extremely important to them that the workplace function as a "community."[5]

In addition, the infrastructure required to facilitate a new graduate nurse's transition from academia to practice is different today. It requires a commitment of additional time, experience, and, most importantly, coaching and mentoring. Studies have found that each new nurse's tenure follows a typical learning curve as they acquire competence.[6] They further cite that a critical juncture in the nurse's tenure occurs at approximately the 12-month point, when there is an especially great need to support the nurse. The traditional approach to orientation of new hires and new graduates lasting only eight to 12 weeks is no longer adequate.

Jobs for specialty nurses are more difficult to fill. A survey conducted by the American Organization of Nurse Executives in 1998 cites the following data:[7]

Average days taken to fill nursing position vacancies

New graduates:	20 days
Experienced nurses:	45 days
Critical care and operating room nurses:	90 days
Nurse managers and clinical nurses:	90 days

Institutions have identified the need to produce their own specialty and critical care nurses in addition to recruiting nurses with experience in these areas. Mental models about selecting and remain-

ing in one area of practice within nursing are being challenged. Nurses are encouraged to think of their work as a career. To retain nurses, support needs to be provided to nurses to translate their core nursing skills into other practice areas through continuing education and certification programs.[8]

In addition, to address leadership and management vacancies, leadership development programs have reemerged with a twofold focus. Specifically, this approach entails ensuring that today's leaders have the right skills and tools to meet the demands of today's dynamic health care arena and that tomorrow's leaders are being identified and groomed.[9]

A decade or more of research about the factors that contribute to nurse satisfaction have consistently revealed that nurses place a very high value on their work environment, including the degree of respect they receive from their managers, peers, and other members of the multidisciplinary team, particularly physicians. Addressing such concerns is far more difficult than, say, improving pay or benefits because the solutions require sustained systemic changes, at times with individuals or groups who do not share the same values or understand their importance. Because the supply solutions are long term, the efforts to retain the nurses who are currently in the workplace should become the focus of everyone who has a stake in health care.

The attributes of a professional practice environment include the ability of the nurse to establish therapeutic nurse-patient relationships, autonomy and control, and collaborative nurse-physician relationships at the unit level.[10,11] Creating an ongoing mechanism to measure nurse satisfaction is more important than ever. In Table 3 (p. 15), three constructs provide an overview of satisfiers for retention of registered nurses.[12] With recruitment into the profession at an all-time low, retention of this treasured resource is key to the survival of the American health care system.



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The solutions

The data indicate that there are few quick fixes to the problem, and attracting more women and men into nursing programs will take years, if not decades. Former approaches to resolving the nursing shortage will not work. International recruitment, which relieved the pressure on the demand side seven years ago, no longer exists as a viable solution. This shortage is global; former areas of international recruitment face their own scarcity of nurses.[13] In addition, simply increasing the number of training programs or raising wages will not address the problems. A fundamental realignment of the health care system is needed.

More specifically, a multifaceted approach is required to mitigate the nursing and workforce shortage. Steps in this process include the following:

1. Increase supply through recruitment and the development of a pipeline.
2. Improve the environment of care where nurses work.
3. Increase the value and image of nursing in the health care system.
4. Compensate and/or reward nurses in new ways.
5. Create new regulatory standards.
6. Strengthen the support that nurses receive from the multidisciplinary team.

Call to action

Nurses cannot address this issue alone. The complexity of this shortage requires a call to action to legislative leaders, to community leaders, to physicians, and to other health care leaders. There is no single solution, and no one group can cure this problem alone.

For its part, the American College of Surgeons could collectively and individually support the national effort to avert this health care crisis by di-

rectly and indirectly acting on each of the six mandates mentioned previously. By collaborating with nurses, other health care team members, patients, organizations, and the communities we serve, the American College of Surgeons is positioned to help shape the strategic plan necessary to make a positive impact on the worsening nursing shortage scenario. Suggested action steps include:

1. *Educate the membership about the nursing shortage*. This article is just an initial step toward increasing the awareness of the American College of Surgeons' membership about the nursing shortage. It is important that surgeons understand the factors driving this shortage. It is a supply problem, with no quick fixes and no end in sight; we cannot afford to lose any nurses. There may be nothing more serious than the nurses' dissatisfaction with their work environment. It relates to both retention and recruitment; satisfied nurses are the best recruiters.

2. *Launch a campaign for nurse-surgeon partnerships*. Strong, collaborative relationships between nurses and surgeons are leading satisfiers for nurses working in the perioperative and surgical settings. Surgeons must create best practices for working with nurse executives, nurse managers, and staff nurses to establish an atmosphere of collaboration and respect. An example of a best practice is initiating an award system based on preestablished criteria for MD-RN teams who best exemplify nurse-physician collaboration. Creating mechanisms for managing disruptive behavior in the OR is another illustration. Lastly, given the growing infusion of new graduate nurses into the profession, what role can surgeons play in facilitating their transition into practice?

3. *Support the creation of a professional practice environment*. It is important to shift the frame of reference of nursing from an "expense" to an "asset." To do so, it takes the teamwork of administrators, nurses, physicians, and other members of the health care team to create an environment in which clinical nurses feel supported and valued in their practice. Surgeons must collaborate with nurses to create and modify effective models of care delivery. Work should be redesigned to promote nurses' autonomy and control over their practice. Support for safety initiatives and technology that enable the work of nurses and minimize errors is imperative. Working conditions must appeal to both Generation Xers and aging Baby Boomers. Most importantly, surgeons must seek out and reflect upon the results of nurse satisfaction surveys in their respective institutions and identify and implement strategies that address the dissatisfiers and reinforce the satisfiers.

4. *Influence health care career decision making and sponsor scholarships for surgical nurses.* Educators say that children often make up their minds about their careers by the fifth grade. Toward that end, it is critical that surgeons and nurses seize opportunities to influence career decision making of young men and women about the profession of nursing. Successful strategies include initiatives such as adopting middle schools in local communities and talking to students about health care professions. Creating and offering scholarships to boys and girls who agree to major in surgical or operating room nursing results in a pipeline of nurses in the surgical practice arena. Other strategies include initiating funds in local hospitals to underwrite the cost of certification for some nurses pursuing certification in surgical, perioperative, or certified registered nurse first assist (CRNFA) programs.

5. *Support the CRNFA strategy.* Operating room nurses are among the most difficult specialty of nurses to recruit. On average, it takes 90 days to recruit an OR nurse. The CRNFA strategy provides an additional step on the career path for experienced OR nurses who enjoy direct patient care yet seek a challenge to advance their skills and role. It may prevent even a small number of experienced nurses from leaving nursing. The presence of a senior CRNFA with advanced skills in the OR can

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help to retain OR nurses through education and professional development support. CRNFAs can function as needed as interpreters/mediators between surgeons and nurses during procedures to enhance effective communication and care. In areas where surgical residents are in short supply, CRNFAs can enhance the ability to maximize OR time and volume.

6. *Influence health care workforce legislation.* Surgeons armed with the facts and potential solutions for addressing the nursing shortage are poised to influence local and national health care workforce-related legislation. As health care leaders, surgeons and nurses should invite local and national legislators to tour/meet with them to learn about the health care issues firsthand. Once these relationships are established, you are then positioned to partner with legislators to draft and edit legislation. In addition, writing letters of support and/or providing testimony to promote legislation are visible ways of getting involved.

The road ahead

On February 25, 2001, a front-page headline of the *Boston Globe* read, "Needed: RNs to aid ailing profession."[14] The profession is not ailing—the overall health care system is. Nursing is critical to its redefinition and survival.

The retention and recruitment of registered nurses needs to be a shared priority. We need long-term strategies that demonstrate to nurses that they are valued and that help position nursing to capture the interest of a new generation and retain the clinical intelligence of experienced nurses.

The ability of our health care delivery system to meet its future workforce needs is being determined right now. Tomorrow's patients are at the mercy of the decisions and actions we take today. Ω

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Cognitive changes and retirement among senior surgeons

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Deciding whether to reduce one's workload or to retire can be difficult and often involves less than ideal circumstances. Rather than risk a damaged reputation, many surgeons would benefit from objective measurement of the inescapable effects of aging so they can make data-driven, informed decisions about their futures.

Background

Several years ago, some colleagues and I performed a longitudinal study on a small group of surgeons using the Microcog Assessment of Cognitive Functioning test. The mean age of the cohort at the inception of the study was 56 and included both practicing and retired surgeons. Variables such as verbal memory, visual spatial memory, reasoning, attention, and number facility were measured. Five years later, the cohort, with a mean age of 61, was retested using the same instrument. We were unable to detect a statistically significant difference within subjects or the group as a whole, leading to three possible conclusions: no actual change occurred over this five-year interval, the sample size was too small to detect differences, or the test itself could not discern the subtle levels of change. Because it is unlikely that surgeons are immune from the effects of aging, we assumed we were dealing with inadequate sensitivity.

New test

So a new test, the Cambridge Neuropsychological Test Automated Battery (CANTAB), was developed. The CANTAB is being used now because it is believed to be superior in detecting subtle cognitive changes. In fact, more than 160 published studies have shown that the CANTAB is sensitive to cognitive changes over a wide range of medication effects and brain disorders. In addition, a normative database has been used and validated in more than 3,000 patients ranging in age from four to 90 in research studies on four continents.[1-3]

The test was conducted during the 2001 Clinical Congress in New Orleans, LA, under the sponsorship of the College. Within the constraints of time and available computers, we were able to complete the CANTAB protocol on 75 surgeons. In the future, we plan to recruit a much larger population of surgeons with a wider range of age. Subjects who participate will be tested on two occasions over the

course of the coming one to four years. This system will allow us to evaluate objective evidence of the preservation or deterioration of cognitive ability.

The study design calls for comparison of scores over time, with the initial test providing the baseline. Surgeons age 45 or older were included in the original group, and we did a preliminary review of the data compared to the norms for this test that was controlled for age and IQ. All of the individuals who took the test were within the range of normal for cognitive variables. With one exception considered to be a probable invalid test, the measured reaction times were significantly faster than predicted. Those who provided the name of their personal physician will receive a report indicating how their performance compared to age-matched peers. For each of the next four years, we plan to test an additional cohort of surgeons and to retest the entire group in year five. Data will be provided privately to the physicians to protect the information from medicolegal discovery and to assist them in making appropriate decisions regarding their practice and career.

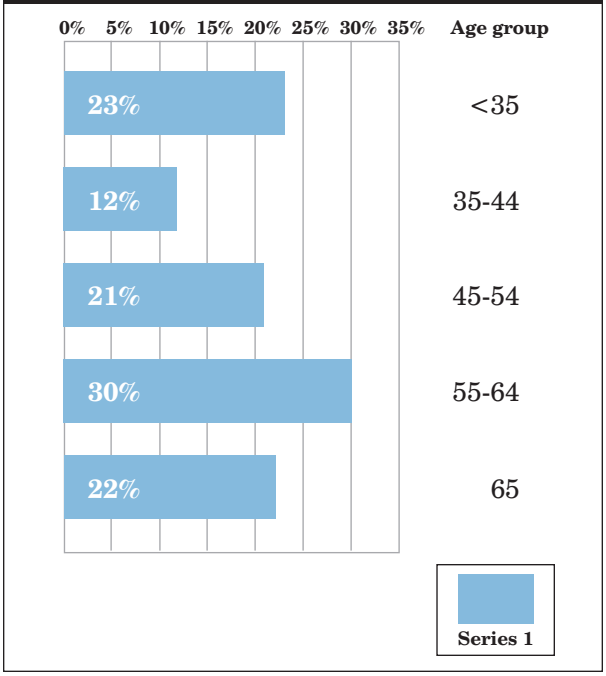
Initial results

We took advantage of the booth located in the exhibit area of the 2001 Clinical Congress to ask all visitors to complete a self-report survey. The majority of the 321 respondents were in private or group practice and only those people less than 35 years of age reported a higher percentage of academic affiliation than their peers. Age distribution of the respondents is shown in the figure on this page. A reported decline in clinical workload began in the age group more than 45 years of age, as did a decrease in complexity of cases managed. While this tendency increased in each age group, only 24 percent reported a decline in workload and 17 percent a decrease in the complexity of their cases. Deterioration of information recall was also reported in 6 percent of those age 45 to 54, but increased to only 9 percent of those 55 to 64 years old, and 7 percent of those over 65, rates comparable to declining name recognition. Overall, 27 percent reported a decline in name recognition ability.

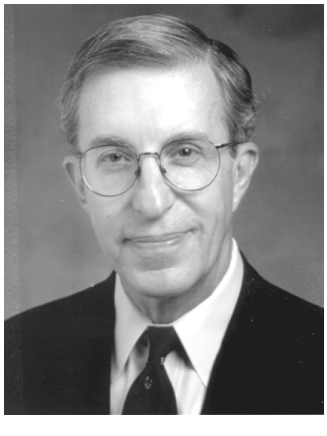
Regarding mastery of new technology in the field, such as laparoscopy or endovascular techniques, the majority of respondents in all age groups indicated that they had actively learned to successfully use it or contributed to its further development. Only 5 percent of the respondents up to age 55 classified themselves as spectators to new technology, and only 13 percent of the individuals over age 55 placed themselves in that category.

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Age distribution of responders to the self-report survey used at the 2001 Clinical Congress



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Provider volume and clinical outcomes in surgery: Issues and implications

by
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Concern about quality in health care has undergone dramatic resurgence in recent years. Unfortunately, the availability of objective data on the quality of care delivered by individual surgeons and hospitals has remained limited. For this reason, patients, insurers, corporate purchasers, and policymakers are looking increasingly to provider volume as a surrogate indicator for quality of care.

A growing body of literature finds a positive association between hospital and surgeon volume and clinical outcomes in surgery. The magnitude and the nature of this association appear to be highly variable, however, depending on the procedure and on the study design. The methodological rigor of investigations on volume and outcomes is also highly variable. For surgeons to take part in this discussion and the policy debate that arises from it, we need to understand the conceptual issues underlying the debate and to be able to critically assess the literature.

This article explains the conceptual issues that form the basis of the discussion about provider volume and clinical outcomes and proposes a method to evaluate the literature. It reviews some of the findings in the literature and then describes the policy implications of those findings.

Conceptual issues

Provider volume itself is not the equivalent of health care quality. Rather, it serves as a proxy for quality, because quality itself is difficult to define and difficult to measure. Many initiatives under way hold the promise of eventually improving the measurement of health care quality.[1] In the meantime, however, clinical volume will continue to be used as an indicator of quality and a predictor of outcome.

Two hypotheses have been proposed to explain the association between volume and outcomes. The "practice makes perfect" hypothesis is based on the notion that repetition improves a surgeon's or hospital's ability to perform a procedure. The "selective referral" hypothesis stems from the premise that those providers who have good outcomes receive more referrals as a result, and therefore have higher volumes.

The practice makes perfect hypothesis has intuitive appeal but begs several questions. Is there a limit to how much a surgeon or hospital can improve with increasing volume? Is there a threshold of experience that a provider must obtain before seeing any improvement in quality? Do all surgical procedures improve with higher volumes? One would expect, given the practice makes perfect hypothesis, that for simple procedures, practice may not be necessary, whereas for more complex operations, practice would be important; that is to say, a strong relationship between volume and outcomes would exist for esophagectomy but not for breast lumpectomy.

For the selective referral hypothesis to be true, two conditions must be met. First, patients and referring physicians must know which surgeons and hospitals have better outcomes. Second, they must be willing and able to act upon such knowledge. With a few exceptions, such as the public reporting of mortality statistics for cardiac surgery

in certain states, outcome data for individual surgeons and hospitals are not, in fact, available to the public. Even when such data are available, referring physicians still do not base their referrals on that information,[2,3] and patients do not necessarily use that data when choosing providers.[4,5] The selective referral hypothesis also requires that patients have their choice of surgeons and hospitals, but many patients do not for financial, insurance, logistical, or other reasons.[6]

An alternative way to think about the relationship between volume and outcomes is to ask just what high-volume providers do differently than low-volume providers. Do they take specific actions that others do not? If so, which of those actions affect outcome? Health services researchers would call such specific actions "processes of care." An example of a process of care is a specific maneuver that a vascular surgeon does during a carotid endarterectomy, or the cross-clamp time during coronary artery bypass grafting. The more we learn about the differences in specific processes of care and their effects on patient outcomes, the more we could potentially improve the outcomes of low-volume providers.

Critically assessing the literature

The literature on volume and outcomes in surgery is growing rapidly, and the quality of the literature is highly variable. The ideal study should have findings that could be generalized beyond the sample of the study and could provide some insight regarding the magnitude and nature of the relationship between volume and outcome. Thus, a surgeon reading these studies should examine several factors, including the type and size of the sample being studied, the use of risk adjustment, the quality and type of data used, and the measurement of clinical processes of care.

- *Sample*. For a study to be truly generalizable, it must examine a population-based sample of patients and all surgeons/hospitals available to that population-based sample. An example of a population-based sample would be all patients undergoing coronary artery bypass graft in New York State in a given year. An example of a nonpopulation-based sample would be all carotid endarterectomy patients seen at two hospitals. Such a study might still provide valuable information, but its conclusions could not be considered those from which generalizations could be drawn.

A study should also include enough variability among the providers being compared. For example, one study of pancreaticoduodenectomy in Maryland included 15 hospitals, but only one institution qualified as "high-volume." Thus, the ability to generalize its findings to all high-volume hospitals is limited.

- *Risk adjustment*. One of the most important aspects of any outcome assessment is risk adjustment. Risk adjustment is the process of accounting for differences in patients' comorbidities and severity of disease. It enables us to determine whether any differences in outcome are due to differences in the care given or merely to differences in the patients. Some have argued that higher-volume surgeons may have better outcomes merely because they operate on less sick patients, rather than because of anything that they do better.

The type of data used for risk adjustment is also important. Most studies use administrative data, such as diagnosis-related codes, for information about patient comorbidities. This method is fraught with inaccuracies.[7] Very few studies use the far more accurate source of data on comorbidities and severity—namely, clinical information abstracted from patient charts.

- *Data type*. The source of data, in general, is an important factor in determining a study's validity. The most commonly used sources of outcome data are administrative data banks. Such databases are designed for billing purposes, usually only contain information on mortality, and are notoriously limited in their accuracy.[7,8] A better source of data would be a repository of clinical, rather than administrative, information. For example, Medicare's surveillance, epidemiology, and end results (SEER) database was specifically designed to collect clinical details about each patient in the database, rather than merely discharge diagnoses. Finally, the ideal source of data on clinical outcomes would be the actual clinical record. Specific pieces of information about the outcome of a case, such as death, stroke, myocardial infection, and so on, could be obtained.
- *Processes of care*. A few studies measure how high-volume providers differ from low-volume providers in terms of what they actually do. For example, some of the studies of oncologic surgery

adjust for the use of adjuvant therapy or for the type of surgical resection.[9,10] Another example is a study of total hip replacement that adjusted for the type of prosthesis used and for the use of perioperative antibiotics.[11] Such data on what high-volume surgeons actually do differently from low-volume surgeons would have major implications for management algorithms to improve quality.

Literature findings

The literature on volume and outcomes in surgery has become quite extensive, covering many types of surgery, including pancreatic, esophageal, lung, colorectal, breast, cardiac, pediatric cardiac, joint replacement, carotid, and abdominal aortic aneurysm surgery. The reader is referred elsewhere for more exhaustive reviews of the literature.[12,13] Here, we review some of the most significant findings.

The majority of studies find a positive association between higher volume and better outcome.[12] This is true for studies of surgeon volume and for studies of hospital volume.

In general, the more complex surgical procedures show the strongest association between provider volume and outcomes (see Tables 1 and 2, this page). Among all of the procedures studied, the strongest association exists for surgery of the pancreas and esophagus and in pediatric cardiac surgery. One study of outcomes after pancreaticoduodenectomy reported a mortality difference of 7 percent between high-volume and low-volume surgeons. It also found a mortality difference of 14 percent for high-volume hospitals compared to low-volume hospitals.[14] Studies of outcomes after esophagectomy reported a mortality difference between low-volume versus high-volume hospitals ranging from 10 to 13 percent.[15-17] Differences in mortality were more modest for CABG, carotid endarterectomy, lung resection, and colorectal surgery.

A somewhat surprising finding is that even for some relatively simple operations, clinical outcomes improve with higher volumes. One study found that the five-year survival rate for breast cancer patients undergoing mastectomy or lumpectomy was higher at high-volume institutions.[10] Similarly, another study found that survival after mastectomy or lumpectomy was higher in the hands of high-volume surgeons.[18] Because these operations are not particularly complex, the authors of these studies attributed the differences to better coordination of care and more appropriate use of adjuvant therapy by high-volume sur-

Table 1

Difference in mortality between high- and low-volume hospitals

Procedure	Mortality difference (%)*
Pancreatectomy	3-17
Esophagectomy	11-14
Peds cardiac	2-15
Lung resection	3-4
Colorectal	1.7-1.9
CABG	1-4
Carotid endarterectomy	.5-2

*Reported differences in mortality between high-volume and low-volume hospitals, based on a systematic review of the literature (Halm and others, 2001[12]).

Table 2

Difference in mortality between high- and low-volume surgeons

Procedure	Mortality difference (%)*
Pancreatectomy	6-7
Lung resection	0
Colorectal	1.86-1.90
Abdominal aortic aneurysm	5-12
Carotid endarterectomy	1-4

*Reported differences in mortality between high-volume and low-volume hospitals, based on a systematic review of the literature (Halm and others, 2001[12]).

geons and hospitals. Thus, provider volume appears to matter not just for technical reasons.

It is important to remember that although higher patient volumes appear to be associated with better outcomes, this is true only on average.[19] A large amount of variation in outcomes still exists among individual surgeons and hospitals. Thus, some high-volume surgeons have poor outcomes, and some low-volume surgeons have very good outcomes.[20,21] Policies based solely on provider volume, such as steering patients toward higher-volume hospitals, therefore, might improve outcomes on average but not in every case.

One reason for the variability among individual surgeons is that some high-volume surgeons operate at low- or intermediate-volume institutions, and some low-volume surgeons operate at intermediate- or high-volume institutions. Although we know that both hospital and surgeon volume affect outcome, we do not know what their relative contributions are or how they interact, because very few studies have evaluated both surgeon volume and hospital volume together.[12] Policies based solely on surgeon volume without taking into account hospital volume (and vice versa), therefore, will not always have their intended effects.

One study of coronary artery bypass in New York State evaluated both surgeon volume and hospital volume.[22] It found that high-volume surgeons at high-volume hospitals had a risk-adjusted mortality of 2.18 percent, whereas low-volume surgeons at low-volume hospitals had a risk-adjusted mortality of 14 percent. High-volume surgeons had lower mortality rates than low-volume surgeons, regardless of hospital volume.



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A recent study of common cancer procedures also evaluated the effects of both surgeon volume and hospital volume.[23] It found that for colectomy, lung lobectomy, and gastrectomy, the lowest risk-adjusted mortality rates were for high-volume surgeons at high-volume hospitals, and the highest risk-adjusted mortality rates were for low-volume surgeons at low-volume hospitals. Patients operated on by high-volume surgeons at high-volume hospitals usually had lower mortality rates than patients operated on by low-volume surgeons or in low-volume hospitals, or both.

Although it does appear that higher volumes are associated with better outcomes, a number of questions remain regarding the specific nature of that association. Does the association between volume and outcome diminish over time, once a procedure has existed for a longer time and has become more widespread? Is there a threshold effect—a certain volume beyond which there is no more improvement in outcomes with increasing volume? Is there a second threshold effect—a volume beyond which outcomes are worse?

How do surgeons' outcomes change as they perform a given procedure more times? What is the shape of the learning curve? In particular, what is the shape of the learning curve for a newer surgeon learning a standard procedure or for a more experienced surgeon learning a new procedure? Is there a constant procedure volume that a surgeon must maintain to remain competent at performing that procedure? Is the cumulative lifetime volume more important? Does the surgeon's volume with other, similar procedures contribute to the outcome?

Another important limitation of the literature is its focus on mortality as the outcome. Only a few studies measured complications as the outcome of interest. Even fewer studies measured such endpoints as long-term survival, functional status, recurrence of disease, or quality of life.

Finally, although the literature strongly supports the notion that higher volumes are associated with better outcomes, particularly for complex surgery, it sheds very little light on why or how. One of the studies that measured specific "processes of care" found that much of the difference in survival from myocardial infarction at

higher-volume institutions was due to greater use of proven-effective medications (aspirin and beta-blockers).[24] To truly explain the mechanisms underlying the volume-outcome association, future research would need to measure specific details about what higher-volume providers do differently than lower-volume providers.

Policies

A number of policies have been advocated based on the association between surgeon and hospital volumes and outcomes. One approach would be to publicize data on surgeons' and hospitals' volumes for specific procedures. This could take the form of public databases, Web sites, "report cards," or employer-sponsored information for employees. The success of this type of approach would depend on how well the public could be educated about the complexities of the relationship between provider volume and outcomes. In addition, it would depend on patients' ability to use this information when choosing a hospital or surgeon—an ability that has been shown to be limited.[25,6]

Some large health care purchasers, such as business coalitions and managed care organizations, already are seeking to selectively contract with higher-volume institutions and to encourage referrals to higher-volume surgeons. The Pacific Business Group on Health, a large health care purchasing coalition, requires its health plans to steer patients with certain conditions toward higher-volume institutions.

Another policy approach would be for state governments to regionalize the provision of certain services, thereby boosting volumes at a few institutions. Such policies have been implemented in the past for trauma and for newborn intensive care. In addition, some states have certificate of need programs that limit the number of hospitals allowed to perform certain procedures, such as cardiac surgery and organ transplantation.

The effect of a large movement of patients away from lower-volume providers toward higher-volume providers is not well understood and could include some unintended consequences. As higher-volume institutions developed greater market share, they would have greater ability to raise their fees. Thus, regulation of fees might need to be implemented concurrently. Hospitals might have a new, medically inappropriate incentive to admit or to operate on a patient in order to boost volumes. Finally, the use of volume criteria could make it more difficult for new surgeons and new institutions to break into the market.[25] Special provisions for new surgeons or for surgeons-in-training might be necessary.

A final approach for improving outcomes would be to implement quality improvement programs. Research that identifies specific processes of care associated with higher volumes could be used to improve the performance of lower-volume surgeons through retraining and education programs. In order for this to be possible, future studies would need to measure specific processes of care. Databases containing such specific data and based on population-based samples would be extremely helpful to this end.

Conclusion

Overall, higher surgeon and hospital volumes appear to be associated with better clinical outcomes, particularly for less common and complex operations. The literature on the subject is quite extensive but has a number of methodological limitations. It leaves unanswered many questions regarding the specific nature and magnitude of the association between volume and outcomes.

Most of the policies that have been proposed seek to shift patients away from lower-volume providers toward higher-volume providers, either through public education efforts, selective referral and contracting, or government regionalization of care. An alternative approach would be quality improvement programs in which lower-volume

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providers could learn from the practices of higher-volume surgeons and hospitals. Rather than using volume as a proxy for quality, such an approach would seek to improve the actual quality of care being rendered. Ω

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IN THEIR OWN WORDS

At the bedside and the bench: Research skills that last a lifetime

by PATRICIA L. TURNER, MD,
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For two years, I served as a senior staff fellow in the National Heart, Lung, and Blood Institute of the National Institutes of Health (NIH) in Bethesda, MD. Among the many other realizations that have come to me as the result of this experience, and others like it, is that research holds an awkward place in graduate surgical education.

For those individuals who train at certain academic institutions, it is often assumed that the length of surgery residency is seven years, including a two-year stint in the research laboratory. Conversely, for many who train at community programs, research could be perceived as a waste of time and an impediment in the already too-long period between medical school and practice. Some programs have chosen a combined approach, in which residents spend only one year in the laboratory, or, in the case of my own institution, only half of the individuals in each resident class are selected to pursue research endeavors. Still other programs include a small amount of elective time built into the schedule, which may be used for short-term projects as designed by individual residents.

As someone who enjoys research and has pursued scientific inquiry both at the bedside and at the bench, I have always recognized the inherent value in the pursuit of scientific questions. The critical learning and thinking skills that are required to design, execute, and complete research projects are in many ways

the same skills prized in the successful surgery resident. Research at any stage of training—in undergraduate education, medical school, or residency—encourages the development of these thought processes and promotes clarity of thought and organization, which, in turn, enhances performance on written tests and oral examinations. The ability to crystallize complex concepts into easily understood "layperson's language," while helpful when drafting grant proposals, is also critical in our interactions with patients and their families.

There is real benefit to mastering these skills, and I would not want these opportunities to be lost as we narrow the focus of surgical graduate medical education, reform work hours, and consider implementing the "four-plus" paradigm, which advocates compressing the general surgery residency into four years plus additional fellowship training in an area of specialization. Despite pressure to truncate and streamline the residency training process, let us not lose sight of the value of time spent in the research laboratory. In fact, it is my hope that more residents, not fewer, would be exposed to well-structured research endeavors during their training, and that many of them would experience the sense of accomplishment that accompanies having their work published or presented to an audience of their peers.

Make no mistake. I fully support some of the recently espoused suggestions to revamp the surgical educational process. I am aware of the implications of the abysmal match results of recent years. The 2002 match, while leaving fewer categorical positions unfilled, was still problematic in that only 931 U.S. medical school seniors ranked any of the 1,039 possible categorical surgery positions.

Recent discussions among the American Board of Surgery (ABS), the Surgery Residency Review Committee (RRC), the Association of Program Directors in Surgery (APDS), and every other governing body of general surgery have focused on the falling interest among medical students in pursuing a general surgery career. As a participant in an ABS retreat last winter focusing on this problem, I was encouraged by the genuine interest and thoughtful questions and comments from the ABS leadership with regard to the factors that most heavily influence the choices of residents and medical students. As we refine our scope of vision and identify some of the nonessential components of the early years of surgery resident training, we should not, without careful consideration, shorten or eliminate protected research time.

Support needed

I am very fortunate to have had ample opportunity to work with supportive mentors over the years who have fostered my ongoing interest in research. In fact, my first research exposure was in high school and continued in college, between college and medical school, during medical school, and as an NIH senior staff fellow in the National Heart, Lung, and Blood Institute. It is nearly impossible to overstate the influence of faculty members' scholarly activities on residents' perception. Only by seeing patient care coordinated seamlessly with research responsibilities do residents master both of these important skills.

My time constraints are the same as other residents. It is possible, although challenging, to find time to pursue professional growth outside the clinical arena. Residents should learn to think and write scientifically and begin to participate in organized medicine, while maintaining their clinical responsibilities.

A supportive home institution is the key. Residency programs must genuinely support their residents' endeavors and not penalize, however unwittingly, the resident who requests time out of the call schedule to present a paper or who requires flexibility in order to attend the sort of collaborative meetings that are often required to bring projects to fruition. These responsibilities should be viewed as part of the training process, not as an extracurricular activity. I would contend that these are not the times to require repayment of missed call days or mandatory vacation use. An invitation to give a research presentation or lecture is clearly an accomplishment for the resident, but also reflects well on his or her department and institution. Moreover, exposing junior residents to their colleagues' projects will likely foster interest in pursuing their own research activities.

Gateway to opportunity

In addition to the obvious ways that research helps to increase the scientific knowledge base and translates into personally fulfilling papers and

presentations, it has also helped me to take advantage of several interesting opportunities, each of which is an outgrowth of my exposure to and facility with biomedical research. For example, in June 2000, at the annual meeting of the American Medical Association (AMA), I was elected to the organization's Council on Scientific Affairs (CSA). As a member of the College's Candidate and Associate Society, the ACS supported my campaign. Although I had been active as a medical student in local and regional AMA affairs, I was still a relative newcomer to the national AMA. As such, the College's endorsement was invaluable in my viability as a candidate for the position.

The CSA's collaborative focus on academics, organized medicine, and scientific inquiry seemed to constitute an ideal combination of my interests. The CSA advises the AMA on issues of biomedical research and encourages the practice of evidence-based medicine. My interest in this particular council was stimulated because I enjoy the prospect of reviewing the scientific literature, focusing on topics of clinical significance, and making recommendations that influence patient and physician decisions. The CSA provides the scientific foundation for many of the policies and positions the AMA advocates, and therefore exerts significant influence on national health policy.

The work of the council is always timely and relevant, and I was impressed as I reviewed some of the topics presented at the AMA's 2000 interim and annual meetings. These included screening recommendations for prostate cancer, the physician's role in organ donation, an evaluation of the federal abstinence-only educational programs, and a comprehensive report on issues affecting women's health. Their topics seemed both broadly applicable and appropriate.

I was reminded of the timely nature and value of their meticulous reviews when I read the CSA report on medicine's response to terrorism. The report recommended the development of an AMA/Federation plan that identified the specific needs, roles, contributions, and participation of organized medicine and individual physicians in disaster planning, and in response to terrorist attacks in their states or communities. A follow-up report was published the following year, with more specific recommendations for action. These exceptionally well-timed reports were presented in June 2000 and June 2001 and became an incredible resource for the AMA after the events of September 11.

Critical reading and writing skills also have proven invaluable in my role as the sole resident member of the general surgery RRC. As a voting member of the committee, I review and critique residency programs and monitor their adherence to the Accreditation Council for Graduate Medical Education (ACGME) program requirements. Participating in the work of the committee with many of the most influential individuals in surgery graduate medical education is a heavy responsibility, but it affords me a truly unique perspective into the inner workings of our educational process.

Even here, my research background is relevant. As part of the process for choosing their next resident member, I am sure that RRC members evaluated candidates' ability to critically review documents (in this case, the voluminous program information forms, and extensive site visitor's reports). Furthermore, one of my most challenging tasks has been to distill volumes of program data into a clear and concise set of reviewer's notes that adequately convey my thoughts to other committee members and provide supporting documentation for my recommendations.

In addition to the academic and intellectual benefit of training residents to pursue scientific inquiry, there are also financial benefits associated with pursuing research efforts. As we all have heard in painful detail, reimbursement for

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In compliance...

...with HIPAA rules

by the Division of Advocacy and Health Policy

This month, we offer a strategy for determining whether your software vendors will be able to provide coding and claims processing products that comply with the Health Insurance Portability and Accountability Act (HIPAA). If your vendors cannot comply, you should find new distributors.

In the October 2001 issue of the *Bulletin*, we provided a quick implementation guide for health care transactions, which can be viewed on the ACS Web site at *http://www.facs.org/dept/hpa/pubs/whatsurg1001.pdf*. Hopefully, your practice has begun discussions with your practice management vendors or claims clearinghouse to ensure that the products they supply to you are HIPAA-compliant. Following are some questions that practices should raise during these conversations.

Questions to ask

- When will the software have the capability of exchanging HIPAA-compliant versions of electronic transactions (patient eligibility, claims for encounters, claim status, and remittance and payment advice)?
- When will the software support the required code sets (CPT, ICD-9-CM, and HCPCS drug codes)?
- Has the software database been modified to allow entry and storage of all required data elements used to build the HIPAA transactions?
- Will the software let your practice conduct these transactions directly with payors, or do they have to go through an intermediary, such as a clearinghouse?
- Has the software received certification that it can, in fact, generate HIPAA-compliant transactions? If so, which organization (EHNAC, Claredi, Foresight Corporation, and so on) certified the software?
- How can your practice use the software to test the new transaction formats with your major payors? When will the software be available to your practice?
- Will the practice be able to continue processing claims in existing electronic formats while new formats are being tested?
- How will the software accommodate the anticipated national provider identifier and the national payor identifiers? If the federal government proceeds with the development of a patient identifier, how will the software accommodate it?
- What are the vendor's contingency plans if it cannot deliver the necessary modifications on time?
- Does the vendor assist with disaster recovery and/or emergency operations by providing alternative files and eligibility lists, accounting for disclosures, and so forth?

Your practice also needs to ask the vendor whether the changes will be made as part of a maintenance contract or whether there will be additional cost to you. We strongly encourage you to get the answer in writing.

Deadline approaching

Your practice must be compliant with the transactions regulation on October 16, 2002. If your practice will not be ready by that date, you must file for a one-year extension. You may file online at *http://www.cms.hhs.gov/hipaa/hipaa2/default.asp* or download the form and file your plan on paper. The benefit of submitting the plan online is that you will receive a confirmation number, which will serve as acknowledgment of your extension. The Center for Medicare & Medicaid Services (CMS) will not acknowledge receipt of paper submissions. Compliance plans must be submitted electronically by October 15, 2002. Paper submissions should be sent to CMS and must be postmarked no later than October 15, 2002.

Privacy officers should bear in mind that state laws governing the confidentiality of medical records may be preempted by the federal HIPAA privacy regulations. Any policies developed for

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Keeping current

What's new in *ACS Surgery: Principles and Practice*

by Erin Michael Kelly, New York, NY

Following are highlights of recent additions to the online version of *ACS Surgery: Principles and Practice,* the practicing surgeon's first and only Web-based and continually updated surgical reference. A sample chapter and detailed information on *ACS Surgery,* including how to save $20 on a subscription to the online version, is available by visiting *www.acssurgery.com/learnmore.htm.*

VII. Special Problems in Perioperative Care

11. The Pregnant Surgical Patient. David C. Brooks, MD, Cherie P. Parungo, MD. Management of the pregnant patient differs from that of other patients in several ways. First, pregnancy induces a variety of mechanical, hormonal, and chemical alterations in the patient that may confuse and mislead even the most experienced surgeon. Second, a surgeon's natural inclination when faced with a pregnant patient experiencing abdominal pain is to temporize. This tendency, which generally arises from the misconception that surgical intervention may injure the fetus, is responsible for delays in diagnosis and ultimately for the unfavorable outcomes often associated with acute abdominal pathology in pregnant patients. Third, pregnant patients require a multidisciplinary approach to care that involves the surgeon, the obstetrician, the radiologist, and the anesthesiologist. Finally, and most important, a surgeon treating a pregnant woman is actually caring for two patients and has the same responsibility to both.

In their revised chapter, Drs. Brooks and Parungo review the approach to abdominal pain in pregnant patients and urgent surgical problems in the pregnant patient, including management of blunt and penetrating injury, intestinal obstruction, and peptic ulcer disease. They also discuss the physiologic changes of pregnancy and how these changes help shape general surgical principles in this population (this section addresses perioperative concerns, such as fetal monitoring, radiography, and anesthesia). Finally, they address certain nonurgent surgical problems associated with pregnancy, including hemorrhoids, varicose veins, and deep-vein thrombosis. Subscribers may view the full text of "The Pregnant Surgical Patient" at *www.acssurgery.com*.

V. Operative Management

18. Appendectomy. Hung S. Ho, MD. In this chapter, Dr. Ho fully describes both open and laparoscopic appendectomy and discusses how to

Online discount

As a special member benefit for ACS Fellows, Associates, and Candidates who are not already subscribers to the College-sponsored *ACS Surgery: Principles and Practice,* we are pleased to offer a $20 discount on subscriptions to the online version of the reference. You pay an annual subscription fee of $179, instead of the customary $199 rate. Please go to *www.acssurgery.com/learnmore.htm* for more information and to save $20 on the online version.

Subscribers to the print and CD-ROM versions of *ACS Surgery* continue to receive free online access to the monthly updates and full text by visiting *www.acssurgery.com*. You will need your nine-digit account number, which may be obtained by calling 800/545-0554 or 914/962-4559 (outside the U.S.), by faxing 914/962-5076, or by e-mailing acssurgery@dwcweb.net. Updates also are available quarterly through subscription to the *ACS Surgery* CD, which incorporates every online update from the previous three months, and yearly through subscription to the annual hardcover edition of *ACS Surgery,* which incorporates every online update from the preceding year.

choose between them when accounting for special considerations, such as the histologically normal appendix, appendiceal neoplasm, and gynecologic conditions.

At the beginning of the twenty-first century, the gold standard for surgical treatment of acute appendicitis remains the same as during the twentieth: open appendectomy as described by McBurney in 1894. However, there has been increasing interest in laparoscopic appendectomy since the beginning of the 1990s. Meta-analyses of prospective, randomized trials show that although laparoscopic appendectomy is at least as safe as the corresponding open procedure, it is more time-consuming and more costly. Moreover, it remains questionable whether the benefits of laparoscopic appendectomy—reduced postoperative pain, earlier resumption of oral feeding, shortened hospital stay, quicker return to normal preoperative activities, and lower incidence of surgical site infection—outweigh the doubled incidence of postoperative intra-abdominal abscess formation.

According to Dr. Ho, further randomized clinical studies focusing on the efficacy of laparoscopic appendectomy as a diagnostic tool and on the incidence of postoperative intra-abdominal abscess and adhesion formation are needed, as are additional cost analyses. Presently, the only patients for whom laparoscopic appendectomy appears to offer significant advantages are female patients of childbearing age, obese patients, and patients with an unclear diagnosis. Subscribers may view the full text of "Appendectomy" at *www.acssurgery.com*.

Looking ahead

New and revised chapters scheduled to appear as online updates to *ACS Surgery: Principles and Practice* in 2002 include the following:

- "Outpatient Surgery," by Richard B. Reiling, MD, FACS, and Daniel P. McKellar, MD, FACS.
- "Open Esophageal Procedures," by Richard Finley, MD, FACS, and John Yee, MD.
- "Esophageal Procedures: Minimally Invasive Approaches," by Marco G. Patti, MD, FACS, and Piero M. Fisichella, MD.
- "Emergency Department Evaluation of the Patient with Multiple Injuries," by Felix Battistella, MD, FACS.
- "Thoracoscopy," by Valerie W. Rusch, MD, FACS, and Raja Flores, MD.
- "The Elderly Surgical Patient," by James M. Watters, MD, FACS, and Jacqueline McClaran, MD.
- "Anal Procedures," by Ira J. Kodner, MD, FACS.
- "Multiple Organ Dysfunction Syndrome," by John C. Marshall, MD, FACS. Ω

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Socioeconomic tips of the month

A risk management checklist: Part II

This article continues our effort to help indi-vidual practices identify early some of the regulatory stumbling blocks that may cause problems during an audit or a review. Good risk management means meeting and fulfilling reasonable expectations of adequate documentation, billing and collection guidelines, employee screening and training, patient and employee safety, and environmental comfort.

This is the second in a series of risk management checklists. (Part I appeared in the May 2002 *Bulletin*.)

Around the corner

June

- ACS-sponsored basic and advanced coding workshops for surgeons on June 20-21, 2002, in Atlanta, GA. Visit the ACS coding workshop Web page at *http://www.facs.org/dept/hpa/workshops/cdwkshop.html* to register.

July

- Quarterly update to 2002 Medicare fee schedule effective July 1.
- Quarterly update to 2002 correct coding edits effective July 1.
- ACS-sponsored practice management workshop for surgeons on July 13, 2002, in Chicago, IL. Visit the ACS practice management workshop Web site at *http://www.facs.org/dept/hpa/workshops/pmworkshop.html* to register.

Consent issues

Are the following consent-related issues addressed?

- Is there discussion of risks, benefits, and alternatives?
- Is there documentation of a refusal of any or all of the physician's recommendations and warnings from the physician?
- Is there documentation for statutory procedures to comply with state law?
- Are written consent forms used? Are they regularly reviewed?
- Is support staff involvement in the consent process, such as education efforts and witness of informed consent, documented?
- Are educational materials used in the consent process? Are they part of the record and archived when replaced or updated?
- Is the patient's ability to give informed consent indicated when appropriate?
- Is telephone consent documented?
- Is patient follow-up documented as routine, required, or required within a certain time frame?
- Is there written documentation of consent from third parties, such as custodial parents, legal guardians for incompetent adults, guardians, foster parents, courts, and so on?
- Is there documentation of consent discussions when an interpreter is required?

Billing and collections

- Is there documentation that the patient was informed about billing, insurance, and collection procedures?
- Is there documentation that the physician has reviewed the record before a patient's account is sent to collections?
- Are all claims for payment supported by adequate documentation in the medical record for the medical necessity of a particular level of service?
- Does the practice have a program for physicians and employees to make certain the practice is in full compliance with billing requirements?
- Is there a mechanism in place that allows employees to inform superiors about discrepancies in billing without fear of reprisal?

Employee files and training

- Is there documentation of an Illness and Injury Prevention Program for staff?
- Is there documentation in the employee's record on:
 - —Continuing education?
 - —Information on new licenses and renewals?
 - —Certification in basic life support, if appropriate?

—Tuberculosis testing?

—Training in use of specialized equipment or protocols?

—Hepatitis vaccine offered? Documentation of refusal?

—Reference checks?

- Is there documentation of specialized training?
- If drug screening is required, is prospective employee approval given in the application?
- Are applications retained for at least one year or the statutory period?
- Are employee and family medical records kept separate from other patient records?
- For licensed employees, is there a copy of a current, valid license on file?
- Are records maintained for required continuing education?
- Is there a copy of the DEA certificate on file?
- Is there a copy of the National Practitioner Data Bank report on file?
- Are records maintained of staff meetings, decisions, action items, responsible parties, and so forth?
- Are required notices displayed in employee lounge areas?
- Are proper time records maintained for employees to comply with overtime requirements (federal and state)?

Practice environment

- Is the reception area clean and comfortable?
- Are educational materials available and up to date? Are they stamped with practice name and address?
- What is the average patient waiting time in the reception area, the exam room, and so on?
- If the patient schedule is modified, are the change and patient notification documented?
- Is staff instructed in activating an emergency response?
- Are the emergency resuscitation equipment and medications checked frequently and documented?
- Are medications checked at least monthly for expiration dates, or is there a list of emergency medications with expiration dates?
- If a defibrillator is used, is it tested and documented regularly?
- Is emergency equipment and medication readily available and secure?
- Are staff trained in using the equipment?
- Can others overhear discussions with patients on clinical, personal or financial matters in the reception area?
- Is there a private area for confidential discussions?
- Are medication refrigerators separate from employee refrigerators?
- Are all areas of the practice clean and free of debris?
- Are biologics properly disposed, including appropriate containers for sharps?
- Are hallways and patient care areas kept free of obstructions?
- Are Occupational Safety and Health Administration requirements regarding hazardous substances followed, including all required logs?
- Is the lab properly certified for the Clinical Laboratory Improvement Act, including all record keeping requirements, staff training, and supervision appropriate to the required level?
- Are medical gases stored safely?

Better safe than sorry

Generally, well-run practices are performing these activities on a regular basis. If there is any problem at all, it tends to be with the documentation of the work being done and the timing. The best way to resolve these issues is to have a regular schedule for double-checking the items to see that each step is being done. It is also a good opportunity to delegate jobs to different people in the practice. Make sure the individual assigned is qualified to perform the evaluation, and then make sure they report on their findings, corrections, and recommendations.

Practices that make safety, security, and good documentation a part of regular patient care will minimize the risks faced by modern practices and create an excellent environment in which to work and be a patient. Ω

This information originally appeared in "Tips & Techniques," an Internet newsletter published by Econemedix, LLC. Tom Loughrey of Econemedix provides individual practice management consultations to ACS Fellows during the ACS Clinical Congress. All information is © Econemedix, LLC, 2002. All rights reserved.

College news

Professional liability postgraduate course to focus on patient safety

by F. Dean Griffen, MD, FACS, Shreveport, LA

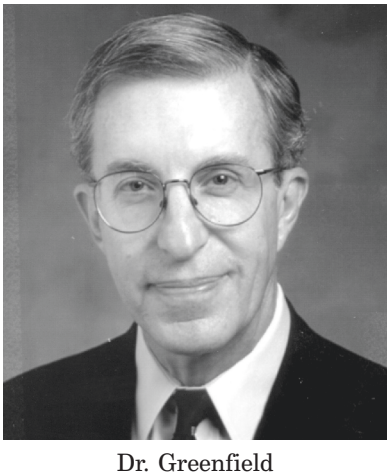
Patient safety has always been a major concern of the American College of Surgeons. Examples of initiatives addressing the issue include espousing stringent criteria for the credentialing of surgeons, publishing manuals for patient safety, providing courses for training surgeons in the use of new technologies, establishing guidelines for the accreditation of outpatient surgery centers, organizing systems for the accreditation of hospitals, clarifying physicians' health issues, and certifying cancer centers.

Resulting from the Institute of Medicine's report, *To Err Is Human*: *Building a Safer Health System*, which declared that hospitals are prohibitively unsafe and that disclosure of errors through new government regulations is a prerequisite for improvement, the relationship between liability and patient safety has only recently been brought into focus.

To more specifically address patient safety as it relates to professional liability, the ACS Professional Liability Committee has assumed a new name—the Regents' Committee on Patient Safety and Professional Liability. Among the many activities of the College that address medical professional liability is a postgraduate (PG) course that is presented by the committee at the ACS Clinical Congress each October. This year's course, A Surgeon's Personal Guide to Risk Management and Trial Participation (PG No. 30), is a reflection of this new emphasis on patient safety.



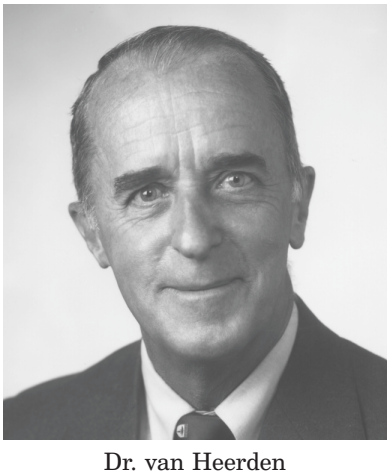
Dr. Fischer



Dr. Greenfield



Dr. O'Leary



Dr. van Heerden

Session I of this year's postgraduate course, The Surgeon's Personal Guide to Risk Management, will help surgeons understand their personal roles in risk management to enhance the safety of patients and limit the liability of surgeons. The faculty

for the course includes: Josef E. Fischer, MD, FACS; Lazar J. Greenfield, MD, FACS; J. Patrick O'Leary, MD, FACS; and Jon A. van Heerden, MD, FACS. The topics include the use and abuse of guidelines in evidence-based surgery, controlling liability by correcting weaknesses through self-assessment and targeted continuing medical education, safe integration of new technologies into active practice, workload and liability, and communication skills as shields from liability.

Despite surgeons' careful attention, patients occasionally pursue litigation. Session II, The Surgeon's Personal Guide to Trial Participation, will assist surgeons in such matters, making points through the medium of a mock trial and related didactic presentations.

Mock trials are unrehearsed, exciting, entertaining vehicles for education. Having presented similar trials for other groups of physicians and attorneys, the faculty for this course is dynamic and experienced. Other pertinent topics will be presented, including medical malpractice from a plaintiff attorney's perspective and a timely overview of the current medical malpractice insurance crisis.

Session I of PG No. 30 will be held on Wednesday, October 9, 8:30 am - 12:00 noon, and Session II will be held on Thursday, October 10, 8:30 am - 12:00 noon. Fellows may subscribe to either session or the entire course at their discretion.

Look for more details in your ACS Clinical Congress Program Planner, which will be mailed this month, or contact Ruth Shea at College headquarters, tel. 312/202-5413, e-mail rshea @facs.org.

Dr. Griffen *is a member of the ACS Regents' Committee on Patient Safety and Professional Liability. He is co-chair for PG course no. 30 with Bruce L. Allen, MD, FACS.*

SENIOR SURGEONS, from page 20

With regard to physical activity, although 32 percent of all age groups indicated that they had reduced the level and intensity of their participation in recreational sports, only 14 percent indicated that they had abandoned one or more activities in favor of less demanding recreation. The remainder indicated that they had maintained or actually increased the level and intensity of participation. Age did take its toll on vision, however, as the use of bifocals for reading progressed from 2 percent among the respondents less than 35 years old, to 10 percent among the respondents ages 35 to 44, 15 percent of the people age 45-54, and 22 percent of those individuals more than 55. The majority of the remainder were likely to use reading glasses rather than bifocals, because only 5 percent of each age group over age 45 reported that they could read the newspaper without assistance.

Concerning retirement, 24 percent of respondents indicated plans to retire within five years, while 27 percent indicated that they would retire at a predetermined age. Rather than use age as the decision to retire, 39 percent of the respondents said that they would retire when they felt that their skills were deteriorating, and 12 percent indicated that they already were retired.

There seems to be a high level of interest in all of the issues surrounding the performance of aging surgeons and the decision to retire from active practice. We feel that by tracking these measures of performance, we can provide feedback to the Fellows to assist them in making informed decisions; we are most grateful to those who have chosen to participate. Ω

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Membership in the American College of Surgeons?

Here's why it's important:

As a body representing all of surgery, the College:

- Provides a cohesive voice addressing societal issues related to surgery.
- Is working toward having an increasingly proactive and timely voice in setting a national tone and agenda with regard to health care.
- Is dedicated to promoting the highest standards of surgical care through education of and advocacy for its Fellows and their patients.
- Serves as a national forum through which surgeons can reinforce the values and ethics that traditionally have characterized the surgical profession.

There IS strength in numbers.

Our members represent every specialty, practice setting, and stage of practice. Their views and concerns are helping to shape the College's agenda for the future.

If you aren't a member of the American College of Surgeons, apply for Fellowship today. If you are already a member, maintain that status and consider getting involved in the work of the College.

Only by banding together and using our collective strength can we bring about positive change for our patients and ourselves–and for surgeons of the future.

Here are some of the many benefits being a member of the College affords you:

- Free registration at the Clinical Congress and annual Spring Meeting
- Access to the College's free coding consultation hotline
- ACS NewsScope, the College's weekly electronic newsletter
- *The Bulletin of the American College of Surgeons*
- *The Journal of the American College of Surgeons*
- Access to all College-sponsored insurance, credit card, collection service, and other helpful programs
- Access to the College's free job and resume data bank

Information on becoming a member of the College and an application form are available online at: *http://www.facs.org/dept/fellowship/index.html*(.) Or contact Cynthia Hicks, Credentials Section, Division of Member Services, via phone at 312/202-5284, or via e-mail at chicks@facs.org.

2003 Oweida Scholarship available

The ACS Board of Governors announces the availability of a scholarship for young rural surgeons, the 2003 Nizar N. Oweida, MD, FACS, Scholarship of the American College of Surgeons.

Purpose

The Oweida Scholarship provides an award of $5,000 to subsidize the participation of a young, rural-based Fellow or Associate Fellow in attendance at the annual Clinical Congress.

Basic requirements

The Oweida Scholarship is available to a member of the American College of Surgeons in any of the surgical specialties who meets the following requirements:

1. Serves a rural community in the U.S. or Canada.
2. Is a Fellow or Associate Fellow in good standing.
3. Is under 45 years of age on the date the application is filed.

Activities

The scholar will attend the annual Clinical Congress of the American College of Surgeons, which will be held in Chicago, IL, October 19-24, 2003. He or she will also attend the annual scholarship luncheon on Sunday, October 19, to meet the members of the Scholarships Committee and awardees from other programs, and to receive his or her check.

Financial support

The successful applicant will receive the sum of $5,000 (U.S.). This amount is to be used to help defray travel expenses for the Clinical Congress, postgraduate course fees, hotel costs, and per diem during the Clinical Congress. Preferential housing in a thrifty hotel near the Congress site will be made available to the scholar. The scholar will make his or her own travel arrangements.

The Executive Committee of the Board of Governors will select the scholar after review and evaluation of the applications.

Applications for this fellowship consist of the following items:

1. One original and eight copies of the applicant's current curriculum vitae.
2. One original and eight copies of a one-page essay, discussing the following specific items:

- Why the applicant wishes to receive the Oweida Scholarship.
- Why the applicant feels he or she is qualified to receive the scholarship.
- Why the applicant characterizes his or her practice as rural.

The closing date for receipt of completed applications is December 15, 2002. A scholar and an alternate will be selected, and all applicants will be notified of the outcome of the selection process, by March 31, 2003.

The Oweida scholar must attend the full week of the Clinical Congress in the year for which it is designated; attendance cannot be postponed. The Oweida scholar will provide a brief report on his or her experiences at the Clinical Congress for possible future publication in the *Bulletin*. A simple accounting for the award is required as well. These items are due by December 31, 2003.

Questions may be directed to Kate Early, ACS Scholarships Administrator, at tel. 312/202-5281. Requirements for the Oweida Scholarship are also posted on the College's Web site, *www.facs.org*.

IN COMPLIANCE..., from page 30

your practice must address the requirements of both the federal and state law. Privacy officers should be familiar with their state laws. Ω

Next month: The self-assessment guide.

ACS guidance on HIPAA issues is based on information contained in the "Small Practice Implementation Guide" *(http://snip.wedi.org/public/articles/indexcfm?cat=17),* © 2001, The Workgroup on Electronic Data Interchange.

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http://www.facs.org/commerce/2002/catsplash.html

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As new titles are added throughout the year, the online catalog will be updated immediately. It's fast, easy to browse, and always up-to-date, the ***2002-2003 Publications and Services Catalog***.



Surgeon helps bring Vatican frescoes to Texas

As a professor of ophthalmology at Texas Tech University and a practicing member of that specialty, Donald R. May, MD, FACS, dedicated his career to improving people's sight. Since he retired from Texas Tech in November 2001, he has devoted his time to making it possible for people to specifically see Medieval frescoes from the Vatican Museums Collections as part of an exhibit that is running June 2 to September 15, 2002, at the Texas Tech University Museum in Lubbock, TX.



In the office of the Chaplain of the U.S. House of Representatives, left to right: Father Neyland, Mrs. May, Dr. May, and Father Daniel Coughlin, Chaplain, U.S. House of Representatives.

Rare sight

Dr. May discovered his new calling in 1999, when he met Rev. Malcolm Neyland, pastor of two small Catholic churches in west Texas. Father Malcolm spoke during a meeting of various professionals in Lubbock, TX, about his efforts to bring the frescoes from Rome, Italy, to the High Plains. Dr. May thought bringing the art collection to Lubbock would be a chance for people to see pieces that have never previously been displayed for public viewing.

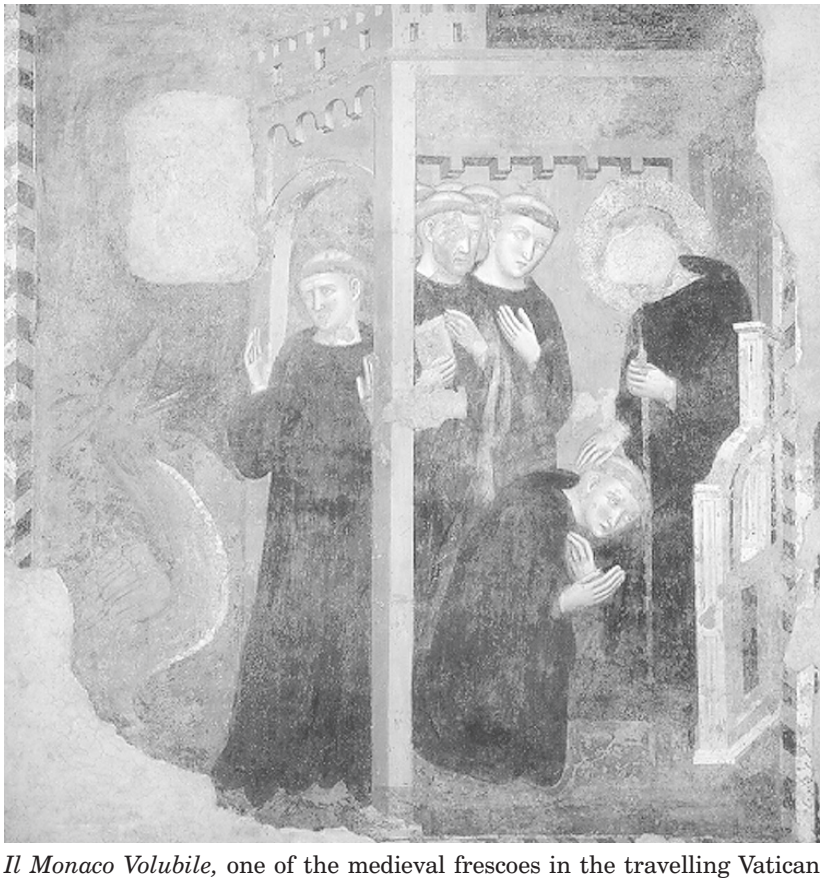
Although the wall paintings depict the lives of saints and martyrs and were designed to instruct and inspire Christians in the traditions of their faith, it was not only their religious significance that drew Dr. May to this endeavor."I really am excited about the opportunity to bring the exhibit to Lubbock and to expose people to art," he said.

The 31 frescoes on display as part of the exhibit, "Traditions and Renewal: Medieval Frescoes from the Vatican Museums," were created mostly during the twelfth and thirteenth centuries, although some were created later. This period of history interests Dr. May, who describes it as the progenitor of the Renaissance, but clouded in the fourteenth century by the scourge of the Black Death.

The frescoes, painted by unnamed artists, were originally located in Rome at two sites—the Basilica of Saint Agnes fuori le Mura and Saint Nichola in Carcere. The frescoes were taken from their original locations in the mid-1800s and were in storage for many years. The Vatican did early restoration on the pieces in 1930 and 1931. Since then, the public has not seen them and has only been exposed to them through print media.

Full-time job

Giving people the opportunity to see the actual frescoes interests Dr. May so greatly that it has literally become his full-time job. He spends 40 to 50 hours per week on this project. He has



VATICAN MUSEUMS/VATICAN MUSEUMS 2002 EXHIBITION

Il Monaco Volubile, one of the medieval frescoes in the travelling Vatican Museums exhibition.

traveled to Washington, DC, to meet members of Congress and representatives of the National Alliance for the Arts to secure federal backing for the exhibition and has attended countless fundraisers. At press time, Dr. May, Father Malcolm, and Mrs. Jane May, president of the Lubbock-Crosby-Garza County Medical Society Alliance, had recently returned from a trip to the Vatican to finalize shipping arrangements. The frescoes are now in Lubbock and have been installed in the Texas Tech Museum.

Admission will be free, as the Pope himself has stipulated. At the conclusion of the Lubbock exhibit, the frescoes will be returned to the Vatican Museums and will not be available for public viewing again until 2025. For more information about the exhibit, phone 866/803-6873 (toll-free) or 806/742-6800 or visit the program's Web site at *www.vaticanexhibit.org*. Dr. May suggests acting as soon as possible, as tickets are already in short supply.

ACS launches CME Joint Sponsorship Program

The Office of Continuing Medical Education of the American College of Surgeons has announced the launch of a CME Joint Sponsorship Program. The program will be conducted by the ACS as a national accrediting organization under the Accreditation Council for Continuing Medical Education and will offer cost-effective joint sponsorship to not-for-profit surgical organizations nationwide for the CME programs and meetings.

Further information and application materials are available from the program's administrator, Kathleen Goldsmith, at JSP@facs.org.

From the College Archives

A look back at surgeons' 1921 to 1923 visits to South and Central America

On February 10, 1923, the S.S. *Vandyck* departed from a New York port. On board were 275 citizens of Canada and the U.S., including Fellows of the American College of Surgeons and members of the their families. Their destination: Central and South America. The trip was "...the culmination of a well-thought-out program to obtain a closer affiliation between the surgeons of North and South America, and to strengthen the foundations of a strong continental union through Fellowship in the American College of Surgeons," Franklin H. Martin, MD, FACS, wrote.*

The groundwork for this trip was set in the winter of 1920, when William J. Mayo, MD, FACS, and Dr. Martin met with surgeons in Panama, Peru, Chile, Argentina, and Uruguay. Next, in the winter of 1921, Thomas J. Watkins, MD, FACS, and Dr. Martin revisited these countries, as well as Rio de Janeiro and Sao Paolo in Brazil. During the course of these trips, Dr. Martin and his companions developed strong friendships with Latin American surgeons and succeeded in persuading more than 100 of them to become ACS Fellows.



Scene from the 1923 ACS South American cruise: The S.S. *Vandyck* entering the harbor, Havana, Cuba.



Scene from the 1923 ACS South American cruise: Dr. Franklin Martin at the podium during the ceremony to celebrate the laying of the cornerstone of Gen. Gorgas Memorial Hospital, Panama.

* Martin FH: The cruise of the *S.S. Vandyck*: A visit to the surgeons of Latin America. *Bull Am Coll Surg*, 7(3):7-12, 1923.

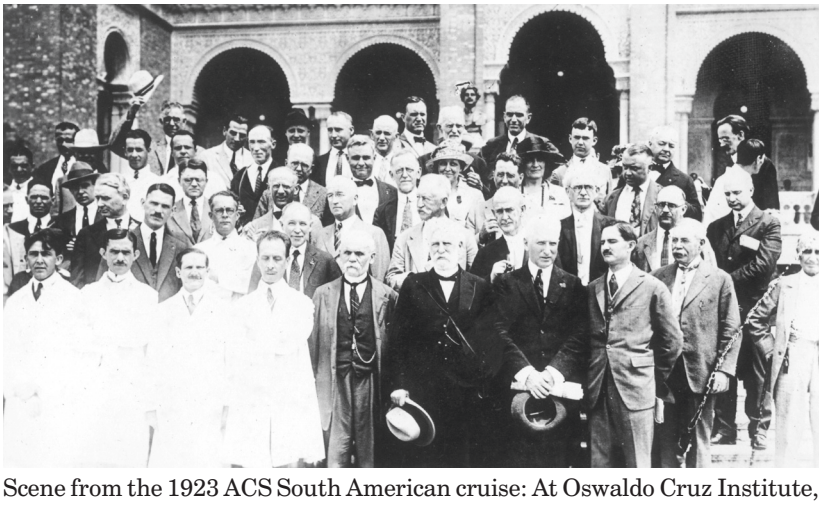
"The story of our...visits and the friendships we had been creating had deeply interested not only the members of the medical profession of our countries, but as well the men of broad vision in our State Department whose principal object it is to maintain a sympathetic relationship between the Governments," Dr. Martin wrote.

"And so, on the tenth of February, at twelve o'clock noon, we had gathered on the snow-covered deck of the S.S. *Vandyck*, our chartered ship, and amid snow-balling, still and motion picture taking, rejoicing and good-byes, we departed from our friends who stood on the dock," he noted.

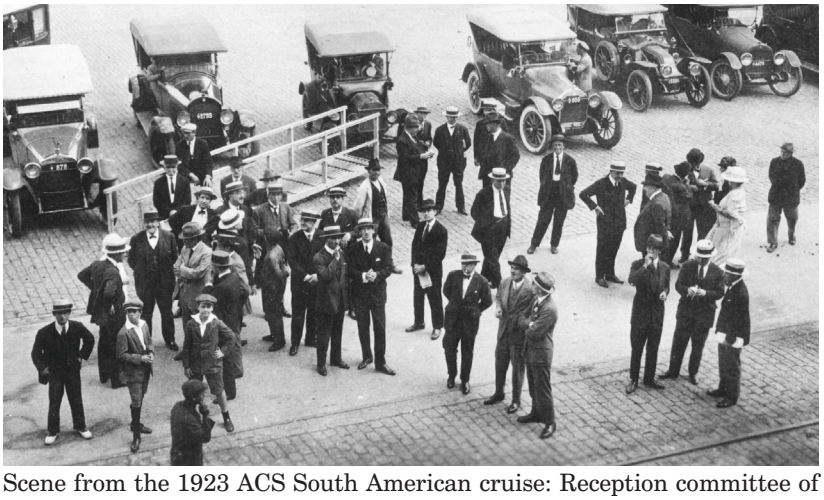
According to Dr. Martin, the objectives of the mission included: "social intercourse with our Latin American neighbors; an observation of their methods of practicing medicine and surgery; visits to their institutions of learning, especially their medical schools; a study of their hospitals and their method of organization; intimate contact with the members of the surgical profession working in their accustomed environment...."

Countries that the Fellows and their families visited during this expedition included Cuba, Panama, Colombia, Venezuela, Trinidad, Brazil, Argentina, Uruguay, Barbados, Chile, and Peru.

Dr. Martin briefly summarizes all of his visits to South and Central America between 1921 and 1923 in his autobiography *The Joy of Living*, published in 1933, and more completely in his book *South America*. These books are housed in the College's archives, along with photograph albums meticulously assembled by Eleanor Grimm, Dr. Martin's private secretary. A small sampling of the photos appear on this and the previous page.



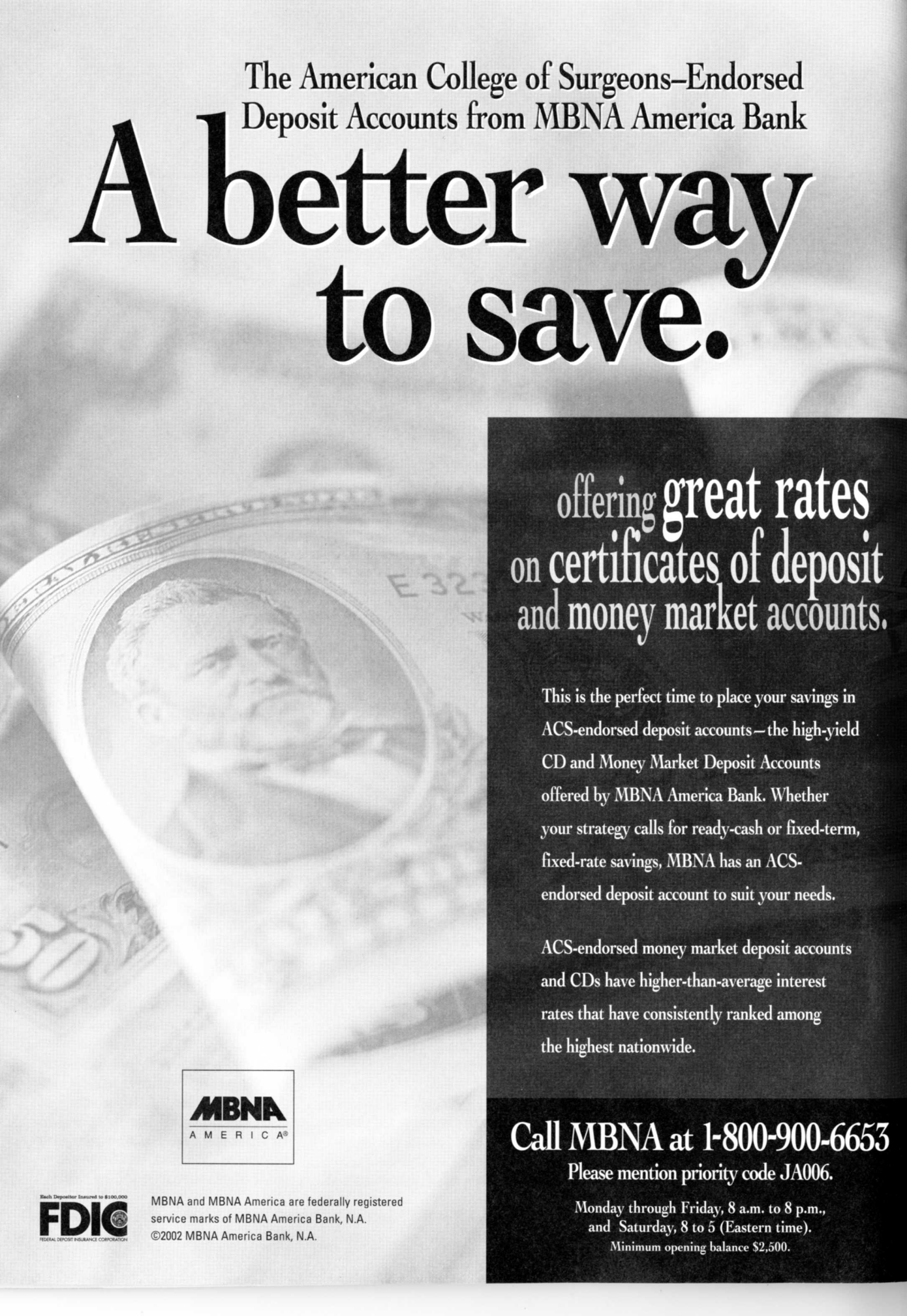
Scene from the 1923 ACS South American cruise: At Oswaldo Cruz Institute, Rio de Janeiro, Brazil.



Scene from the 1923 ACS South American cruise: Reception committee of surgeons, Montevideo, Uruguay.

(The albums from which these pictures were taken were graciously donated to the College by the families of Alexander W. Blain, MD, FACS, and other Fellows who were members of the South American tour group.)

Fellows who are interested in viewing these artifacts and more documentation of the history of the College should contact Susan Rishworth, ACS Archivist, by phone at 312/202-5270 or via e-mail at srishworth@facs.org.


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Chapter news

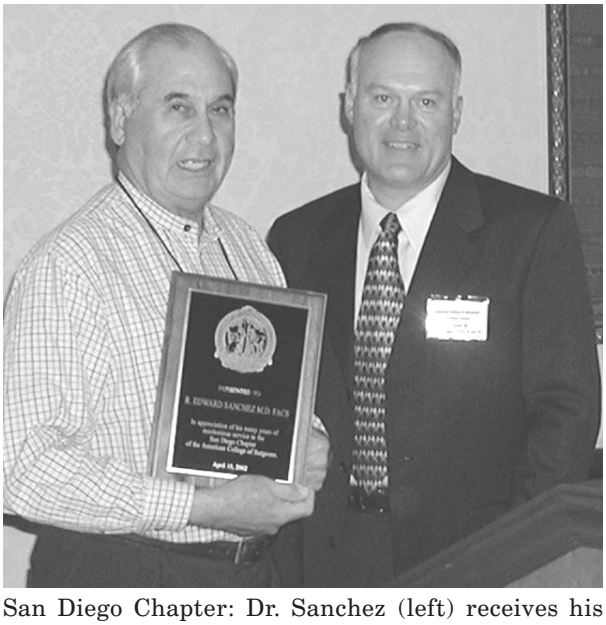
by Rhonda Peebles, Chapter Services Manager, Division of Member Services

To report your chapter's news, contact Rhonda Peebles toll-free at 888/857-7545, or via e-mail at rpeebles@facs.org.

San Diego Chapter honors Dr. Sanchez

At its 2002 Spring Meeting, which took place April 15, H. R. Bohman, MD, FACS, President of the San Diego Chapter, presented the chapter's first Meritorious Service Award to Edward R. Sanchez, MD, FACS (see photo, right). The award recognizes Dr. Sanchez's many years of service and leadership to the chapter and the College. In addition to serving as a chapter officer, Dr. Sanchez also served as a Governor for the chapter and on the California Medical Association's council on legislation.

After the award presentation, Thomas R. Russell, MD, FACS, ACS Executive Director, provided the chapter members with an update on College activities.



San Diego Chapter: Dr. Sanchez (left) receives his chapter's Meritorious Service Award from Dr. Bohman.

Tracking state legislation

The American College of Surgeons has gone "live" on its Web site with a page devoted to state legislative issues. As reported last January, Fellows and College chapters may keep track of proposed state legislation and regulations via this page's database at *http://www.facs.org/dept/hpa/state.html*. The data bank includes the dates of a state's legislative session, a link to each state legislature's Web site, and bills and regulations of particular interest to surgeons. Users may access this information by state, issue, word (text search), or date of last update.

This database is a work in progress, and some states may have very few listings because of slower regulatory/legislative processes or just-released actions currently under consideration. For more information or assistance with this new service, contact Jon Sutton, State Affairs Associate in the Division of Advocacy and Health Policy, at 312/202-5358, or via e-mail at jsutton@facs.org.

Fewer chapters have AWS reps

Nearly five years ago, the Governors' Committee on Chapter Activities recommended that U.S. chapters include a representative of the Association of Women Surgeons (AWS) on their chapter councils. The Governors reasoned that AWS representatives would be helpful in identifying women surgeons who could serve on committees, as chapter leaders, or as faculty at education programs. In 2000, AWS representatives served on 28 chapter councils. As of April 2002, however, that number declined to 19. Currently, the chapters that have AWS representation include: Connecticut, Metropolitan Chicago, Illinois, Maine, Missouri, Montana-Wyoming, New Hampshire, New Jersey, New York, Western New York, North Carolina, Ohio, Central Pennsylvania, South Carolina, South Dakota, Tennessee, North Texas, South Texas, and Washington State.

For more information about the benefits of having an AWS representative on your chapter council or to identify an AWS member for your chapter, please contact the Association of Women Surgeons at 414 Plaza Dr., Ste. 209, Westmont, IL 60559; tel. 630/655-0392, fax 630/655-0391, or e-mail info@womensurgeons.org.

Chapter anniversaries

Month	Chapter	Years
May	Colorado	45
	Maryland	45
June	Alberta, Canada	12
	Arkansas	27
	Connecticut	35
	Metropolitan Washington (DC)	28
June (contd.)	Ecuador	35
	Germany	12
	Greece	16
	Idaho	52
	Ireland	19
	Israel	5
	Maine	51
	Mexico—Northeast	27
	Mexico—Nor-Occidental	31
	Minnesota	31
	New Mexico	17
	Upstate New York	36
	Western New York	47
	North Dakota	46
	Oregon	37
	Philippines	31
	Spain	19
	Wisconsin	31

IN THEIR OWN WORDS, from page 29

surgical procedures is down, malpractice premiums are up, and the ability to care for one's patients without constant interference from managed care organizations has sapped much of the joy out of patient care. The biomedical research arena is one of the few areas that can boast increased funding. The NIH has experienced budget increases from $17.8 billion in fiscal year (FY) 2000 to $20.3 billion in FY 2001, with a recommended FY 2002 budget of $23.7 billion. This represents increases of 14 percent and 16.5 percent. Veterans Affairs research, similarly, has increased from $321 million in FY 2000 to $350 million in FY 2001, with a recommended FY 2002 budget of $395 million. These figures represent increases of 9.1 percent and 12.8 percent respectively. There is financial benefit in the pursuit of scientific questions.

Surgeon involvement necessary

Finally, we do not want to yield control of surgical research to nonsurgically trained investigators. We must continue to develop and support our own surgical investigators. Who better to answer the pressing questions on the cutting edge of surgical care? If residencies forsake research as a valuable part of training surgeons, then we relinquish another bit of control, and sacrifice the opportunity to shape the careers of specific individuals and the future face of surgery.

All of these goals, including research exposure in a streamlined general surgery residency paradigm, can be accomplished without negatively affecting residency training. It is, in fact, part of our program requirement to encourage residents in their pursuit of scientific inquiry. We must take this charge seriously. It is from our current pool of residents that the future Regents and Directors of the College will be chosen. The goals of surgical training—to produce safe, conscientious, technically superior surgeons with well-developed interpersonal and critical thinking skills—can be accomplished in a timely fashion without sacrificing the pursuit of scientific endeavors. Scientific inquiry should, in fact, must, remain an integral part of surgical training. Ω

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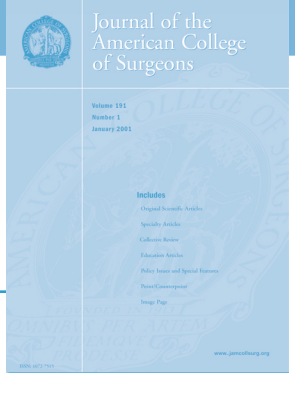
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Advisory Council for General Surgery announces new slide kit

The Advisory Council for General Surgery, with the assistance of Wayne H. Schwesinger, MD, FACS, is pleased to announce a new slide kit on Acute Gastrointestinal Bleeding. The 55-slide presentation is designed to describe the pathophysiology, symptoms, signs, and workup of acute gastrointestinal bleeding. The teaching kit includes slides and a speaker's manual and is meant for use by surgeons and other authorized persons for presentation to other physicians. This slide kit is available for $35 online at *https://secure.facs.org/commerce/2002/current.html* or through ACS Customer Service at 312/202-5474.

Next month in *JACS*



The July issue of the *Journal of the American College of Surgeons* will feature:

Original Scientific Articles:

- Colon Cancer Recurrence

Collective Reviews:

- Recurrent Saphenofemoral Reflux
- Pain Control in Outpatient Surgery

Palliative Care:

- Malignant Bowel Obstruction

What's New in Surgery

- Otolaryngology–Head and Neck Surgery
- General Thoracic Surgery